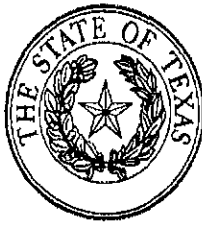


TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER affirming an Order issued by the Executive Director that grants an Emergency Order requested by the Lower Colorado River Authority; TCEQ Docket No. 2014-1044-WR.

On July 2, 2014, the Lower Colorado River Authority ("LCRA") requested that its 2010 Water Management Plan ("WMP") be amended by an emergency order issued pursuant to any authority deemed appropriate, including Texas Water Code ("TWC") §§ 5.501, 11.138, 11.139 and the Governor's Emergency Disaster Proclamation related to drought. Specifically, LCRA's request sought an emergency order confirming that LCRA does not have to provide interruptible stored water to any landowners or customers within the Gulf Coast, Lakeside, or Pierce Ranch irrigation operations, including those who might seek to use stored water for irrigating rice that has to date been watered with groundwater, or for any other purposes such as row, crops, pasture, or wildlife management. The Executive Director ("ED") reviewed and granted LCRA's request by issuing an emergency order pursuant to TWC § 11.139 on July 24, 2014.

On August 6, 2014, the Texas Commission on Environmental Quality ("Commission") considered whether to affirm, modify, or set aside the ED's emergency order. After taking public comment and oral arguments, the Commission determined that the ED's Emergency Order was necessary given the continued drought conditions and low reservoir levels. Consequently, the Commission affirmed the ED's Emergency Order issued to LCRA on July 24, 2014.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

The ED's Emergency Order amending LCRA's 2010 WMP, Permit No. 5838, which is attached hereto as Exhibit A and incorporated into this Order by reference, is **AFFIRMED**.

Issue date: **AUG 15 2014**

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

A handwritten signature in black ink, reading "Bryan W. Shaw".

Bryan W. Shaw, Ph.D., P.E., Chairman

Exhibit A

The seal of the State of Texas, featuring a five-pointed star in the center, surrounded by a wreath, and the words "THE STATE OF TEXAS" in a circular border.

granting an emergency authorization to the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to Section 11.139 of the Texas Water Code

The Executive Director has jurisdiction to consider this matter and makes the following Findings of Fact and Conclusions of Law:

On July 3, 2014, LCRA filed a request for an emergency order suspending any obligation LCRA might have under the 2010 WMP to release interruptible stored water to customers in the Gulfcoast, Lakeside, and Pierce Ranch irrigation operations through the remainder of the irrigation season due to persistent drought conditions in and around LCRA's five Highland Lakes (Lakes Buchanan, Inks, LBJ, Marble Falls, and Travis). LCRA's request is attached hereto as Attachment A and incorporated herein by reference.

1. LCRA has the right to divert and use up to 1.5 million acre-feet (AF) from Lakes Buchanan and Travis under Certificates of Adjudication Nos. 14-5478 and 14-5482. By court order, LCRA has developed a WMP, Permit No. 5838, currently dated 2010, which is part of these certificates.
2. The Certificates of Adjudication and the 2010 WMP govern LCRA's operation of Lakes Buchanan and Travis and dictate how LCRA makes water available from these lakes to help meet "firm" water customer needs, downstream interruptible irrigation demands, and environmental flow needs of the lower Colorado River and Matagorda Bay.

СЛОВО

3. Certificates of Adjudication 14-5478 and 14-5482 state that "LCRA shall interrupt or curtail the supply of water . . . pursuant to commitments that are specifically subject to interruption or curtailment, to the extent necessary to allow LCRA to satisfy all demand for water under such certificate pursuant to all firm, uninterruptible water commitments." The WMP further describes how LCRA will manage and curtail supplies from the lakes during times of drought including through a repeat of the Drought of Record.
4. As established in the 2010 WMP, the combined firm yield of Lakes Buchanan and Travis is 535,812 acre-feet per year (AFY). Of this amount, 90,546 AFY is committed to O.H. Ivie Reservoir, making 445,266 AFY of firm water supply available from Lakes Buchanan and Travis for LCRA's firm water customers.
5. As established in the 2010 WMP, so long as firm demand for water equals the combined firm yield, LCRA can supply water for irrigated agriculture on an interruptible basis. To manage the supply, LCRA's 2010 WMP imposes several trigger points keyed to the total combined storage capacity of Lakes Buchanan and Travis that are intended to ensure the firm water supply is protected during droughts. The most relevant trigger points are set out in the following table:

Combined Storage of Lakes Buchanan and Travis	Date on Which Trigger is Decided	Action Taken
1.4 million acre feet	At any time	Request firm customers to implement voluntary drought response measures.
1.4 million acre feet	On Jan. 1	Environmental releases for instream flows reduced to meet critical needs for ecosystems for following year. Begin gradual curtailment of interruptible supply to four major irrigation operations.
900,000 acre feet	At any time	Request firm customers to implement mandatory water restrictions; develop firm customer curtailment plan.
600,000 acre feet	At any time	If criteria indicate a drought worse than the Drought of Record, then cease interruptible supply and begin curtailment of firm supply.

6. LCRA's 2010 WMP defines "Drought of Record" as "the drought that occurred during the critical drought period." "The Critical Drought Period" is defined as

“the period of time during which the reservoir was last full and refilled, and the storage content was at its lowest minimum value.”

7. Under the 2010 WMP, the LCRA Board may declare a Drought Worse than the Drought of Record (DWDR) if it finds that the following three conditions are simultaneously met:
 - a. Duration of drought is more than 24 months, which is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full;
 - b. Inflows to the lakes are less than inflows during the drought of record; and
 - c. Lakes Buchanan and Travis combined storage has less than 600,000 AF of water.
8. Under the 2010 WMP, once a drought has lasted more than 36 months and a DWDR has been declared by the LCRA Board, the interruptible stored water would be fully and immediately curtailed – making no stored water available for agricultural irrigation or other interruptible uses until lake levels recover or the inflows into the lakes increase substantially. Moreover, LCRA will implement pro rata curtailment of its firm water users once a DWDR is declared and after interruptible stored water (agriculture) uses have been curtailed.
9. Prior to a declaration of a DWDR, LCRA is obligated by the 2010 WMP to provide at least some interruptible water to its four major irrigation operations. Under the WMP, LCRA is to make a preliminary determination in November of its interruptible water releases based on projections of storage on January 1 of the upcoming year.
10. The first and second criteria for a DWDR have been met. The drought has lasted for more than 24 months. Duration of drought is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full, which was February 13, 2005. The cumulative inflow deficit has also been met. The last criteria, storage below 600,000 AF has not yet occurred, but could occur in the next few months.

Current Conditions

11. The combined storage of Lakes Buchanan and Travis on July 21, 2014, was 778,180 AF, or 39% full. The combined storage fell to the lowest level in the current drought on September 19, 2013, which was 637,123 AF or 31.7% full.
12. The inflows in to the lakes are at record lows. Annual inflows into Lakes Buchanan and Travis in four of the last five years are among the ten lowest years of inflow on record. Inflows into the lakes in 2011 were the lowest annual inflows on record,

about 10% of average inflows. Inflows in 2012 were the sixth lowest on record, and inflows in 2013 were the second lowest on record.

13. Extraordinary drought conditions have existed in much of Texas, including the Colorado River Basin for more than three years, dating back to October 2010. State Climatologist, Dr. John Nielsen-Gammon, recognized 2011 as the worst one year statewide drought on record dating back to 1895. Inflows in the first four months of 2014 were lower than inflows in the record low year of 2011. Statewide rainfall for the three-year period from January 2011 through December 2013 was well below normal, totaling 64.84 inches, which is 16.57 inches below normal or 80% of normal.
14. Annual inflows into Lakes Buchanan and Travis in six of the last nine years are among the ten lowest years of inflow on record. Inflows into the lakes in 2011 were the lowest annual inflows on record, about 10% of average inflows. Inflows in 2012 were the sixth lowest on record, and inflows in 2013 were the second lowest on record.
15. Inflows in the first six months of 2014 are 18.9% of the historical average inflows to Lakes Buchanan and Travis. This is the fifth lowest January through June six month total recorded for Lakes Buchanan and Travis and the inflows for this period are lower than any January through June period in the 1950s.
16. The inflows into Lakes Buchanan and Travis during the current drought have been lower for time periods ranging from 12 months to 72 months than the lowest inflows for periods of similar duration during the historic Drought of Record, including the 1950's. The total inflows for the 72 months ending in April 2014 were only about half of the lowest 72 month inflow period in the Drought of Record.
17. The maximum historical annual amount of reported firm water use from the firm supplies of Lakes Buchanan and Travis during 2000 through 2013 was 247,000 AF in 2011. The maximum interruptible water released from Lakes Buchanan and Travis during this same period occurred in 2011 and totaled about 433,000 AF. The maximum total amount released or used from the Highland Lakes, about 714,000 AF, occurred in 2011.
18. The firm water use in 2012 from Lakes Buchanan and Travis was about 148,000 AF. An amount of 31,000 AF was supplied for the environment, and 9,000 AF of water was supplied to farmers in the Garwood Irrigation Division. The total use for 2012 was about 188,000 AF. In 2013, firm use from the lakes was about 173,000 AF, 33,500 AF was supplied for environmental flow needs, and about 22,000 AF of water was supplied to Garwood Irrigation Division. Total use of water from the lakes in 2013 was about 229,000 AF.
19. High temperatures have been unprecedented. The summer of 2011 was the hottest on record in Texas, and 2011 was also the hottest in Austin. Year 2012 tied with

1921 as the hottest on record statewide. Summer temperatures for Austin in 2013 were the fifth hottest on record.

20. The lakes have not been able to recover in any significant manner even with an emergency suspension of nearly all water supply for downstream irrigation in 2012, 2013, and the first half of 2014.
21. Rainfall in the first four months of 2014 was extremely low across the Texas Hill Country, with many locations failing to record even one inch of rain.
22. Despite some generous rains in May and June of 2014, the long-term drought pattern will likely persist and possibly intensify during the hot months of summer. The National Weather Service precipitation outlook calls for below normal precipitation across roughly the eastern half of Texas from July to September, and near to below normal rainfall in Central Texas.
23. Recent weather forecasts provide some hope for relief during the period covered by this emergency order, including an El Niño developing in the September to November period, carrying on through March of 2015. There is at least a 70% chance that an El Niño will develop in the next six months. El Niños often cause a pattern of above-normal rainfall across Texas, mainly during the fall and winter months. The impacts of El Niño can vary significantly.
24. The current drought conditions are outside the range of hydrologic conditions that were considered during formulation of the 2010 WMP.
25. The conditions are similar or worse than conditions in place when TCEQ issued its earlier emergency orders for the 2012, 2013, and 2014 irrigation seasons.
26. As of July 2014, much of the Texas Hill Country was designated as being in a moderate or severe drought with parts in extreme drought.
27. The Governor of Texas issued an Emergency Disaster Proclamation on July 5, 2011, certifying that exceptional drought conditions posed a threat of imminent disaster in specified counties in Texas. This proclamation has been renewed monthly, most recently on July 3, 2014, and includes nearly every county bordering or that contributes inflow to the Highland Lakes.

LCRA's Firm Customers

28. LCRA provides raw water out of the combined firm yield of Lakes Buchanan and Travis to over 60 retail and wholesale potable water suppliers that together serve over one million people. In addition, LCRA provides water to several electric utilities from the firm water supply of Lakes Buchanan and Travis. These electric utilities provide electricity into the electrical grid in Texas operated by the Electric

Reliability Council of Texas (ERCOT) and provide electricity to customers in Texas. LCRA also provides firm raw water to several industries located downstream.

29. The 2010 WMP requires that firm customers (mainly cities and industries) be curtailed on a pro rata basis and that LCRA cease all releases for interruptible stored water (regardless of the impact on the crops) when a DWDR is declared.
30. LCRA-adopted water use reduction targets including mandatory pro rata curtailment of firm water supplies for customers of 20% or more will be implemented when combined storage levels fall below 600,000 AF and other criteria are met for a DWDR.
31. If the 20% reduction in water use is required, many municipal customers plan to eliminate all outdoor spray irrigation. Some customers, such as the City Austin, have already seen significant water savings through reductions in outdoor water use. Industrial customer will have to implement the full 20% reduction more quickly and these reductions, especially for power plants, could impact production.
32. If LCRA is required to follow the 2010 WMP and the drought continues, LCRA and its firm customers may need to acquire or develop large quantities of alternative water supplies to meet essential needs of their respective potable water systems. LCRA's firm customers are working on plans to implement curtailment and secure alternate supplies; however many of LCRA's firm customers do not have any readily available alternative sources of water supply that could substitute for their reliance on the Colorado River, and these projects could take years to develop. Following the 2010 WMP under current drought conditions could pose an imminent threat to firm customers served by LCRA from Lakes Buchanan and Travis.
33. Based on recent lake levels and the forecast, there is a chance of reaching conditions triggering a declaration of a DWDR in October 2014.
34. Currently, LCRA owns four systems that take raw water from Lakes Buchanan and Travis. LCRA also has 15 customers that actively take raw water for municipal purposes from Lake Travis that are not a part of LCRA's utility facilities. The lowest pumping elevations of the intakes range from 605 feet mean sea level (msl) to 645 feet msl on Lake Travis. As lake levels drop, retail water suppliers are unable to pump water from the lakes. This causes wholesale raw water customers to either move intakes to reach the water, or obtain alternate sources. Smaller systems will likely have to haul water from a water utility with a viable source. If the lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, the situation presents an imminent threat to public health and safety for the LCRA water systems and for its customers' water systems.
35. At the time of this order, the public water systems that rely on the Highland Lakes or that draw from the tributaries that typically contribute significant inflow to the

Highland Lakes are already in some form of drought restrictions and are at risk of water supply shortages.

36. Without this emergency order, there may be uncertainty as to what obligations LCRA would have to provide interruptible stored water. In August, some crops could still be planted and other crops that were started with groundwater could be switched to surface water. Later in the season, LCRA may receive requests for water for supplemental uses such as wildlife management.
37. If LCRA had followed the 2010 Water Management Plan this year, it would have had to release as much as 214,300 AF of water to downstream irrigators. Allowing any additional release of interruptible stored water would only amplify the risk and shorten the timeframe that LCRA and its firm customers have to prepare for a DWDR.

Conservation and Drought Contingency Plan

38. LCRA's water conservation plan complies with TCEQ rules. LCRA has required its municipal customers to adopt conservation plans before there was a state requirement.
39. LCRA provides conservation program planning support for its customers. In 2012, LCRA began a rebate program for certain irrigation technologies and a wholesale customer cost-share program focused on conservation. LCRA has supported significant improvements in water use efficiency in rice irrigation systems, including volumetric pricing and canal rehabilitation.
40. LCRA was originally required to develop a Drought Contingency Plan (DCP) as a direct result of the court order adjudicating LCRA's water rights and the Texas Water Commission 1989 WMP Order.
41. When TCEQ adopted the Chapter 288 rules for DCPs, LCRA adopted separate stand-alone DCPs relating to irrigation, municipal, and industrial operations that more specifically addressed the requirements of the Chapter 288 rules. LCRA incorporated all of the same triggers and criteria from the WMP into its Chapter 288 DCP. These DCPs were incorporated into Chapter 4 of the WMP.
42. In August 2011, LCRA called on its firm water customers to voluntarily implement mandatory water use restrictions under their DCPs to reduce water use by 10 to 20%.
43. LCRA-adopted water use reduction targets including the following: water use reduction goals for firm water supply customers of 5% by asking firm customers to implement their voluntary water use reduction measures when the combined storage of Lakes Buchanan and Travis is less than 1.4 million AF; 10 to 20% reduction goals by asking firm customers to implement their own mandatory water

use reduction measures when combined storage levels fall below 900,000 AF; and a mandatory pro rata curtailment of firm water supplies for customers of 20% or more will be implemented when combined storage levels fall below 600,000 AF and other criteria are met for a DWDR.

44. As of July 1, 2014, LCRA has pending or final pro rata plans for all of its firm water customers who are actively diverting water. LCRA is continuing to work with some of these customers to finalize the plans.
45. LCRA has adopted additional changes to LCRA's raw water contract rules that include the procedures for implementing a pro rata curtailment of firm water customers. The rules also provide a surcharge to be set by the LCRA Board for unauthorized use of water (taking more water than authorized under a mandated curtailment of firm water supplies) and clarifying the drought contingency requirements related to golf course irrigation and recreational use.
46. LCRA's WMP requires LCRA to develop a firm water curtailment plan to be approved by the LCRA Board and TCEQ in response to combined storage dropping below 600,000 AF. TCEQ approved that plan for LCRA's firm customers in December of 2011.
47. LCRA has fully implemented its DCP. All of LCRA's firm customers that currently divert and purchase water from LCRA have a DCP. Most of these firm customers have stayed in some form of mandatory water restrictions, significantly limiting landscape irrigation. LCRA's industrial customers have worked to reduce non-essential water uses. Also, LCRA has had several meetings with firm customers in preparation for pro rata curtailment.
48. Except for a six-week period in the summer of 2012, the City of Austin customers have had once a week outdoor watering restriction for the past two years.
49. The LCRA Board approved a no more than once per week watering restriction that took effect in March 2014. The restriction applies if combined storage is below 1.1 million AF and interruptible stored water has been cut off.

Alternatives

50. LCRA has evaluated many alternatives to address the emergency conditions that the drought presents. Alternatives explored include: Utilizing water from LCRA's other lakes, aggressive conservation, interbasin transfers, an off-channel reservoir, and trucking in water from other sources. LCRA has evaluated many other alternatives to address the emergency conditions that the drought presents.
51. None of the alternatives LCRA has identified would avert the projected water supply shortage because most of the supplies identified would produce insufficient or uncertain quantities of supply, would create other operational issues for

customers, may involve a lengthy permitting process (if not implemented on an emergency basis), or would take years to develop. None of the alternatives identified are feasible or practicable alternatives to the emergency authorization.

52. Amending downstream run of the river rights to allow diversion for new uses and at new locations would provide some supply, but the use of these rights alone is not – by itself – a feasible and practicable alternative to the emergency relief related to the 2010 WMP. All of the rights would require amendments to add diversion points, additional places of use, and possible storage. Also, the downstream run-of-river water rights are highly variable in terms of availability and quantity, and do not provide by themselves a sufficient quantity of water to eliminate the need for the emergency relief from the 2010 WMP as requested herein. At best, using the downstream water rights to supply the downstream industrial and municipal users will keep up to about 10,000 AF of water in the reservoirs.
53. In 2012, 2013, and the first six months of 2014, LCRA supplied about 4,000 AF, 1,000 AF, and 3,200 AF, respectively, to firm customers downstream of Austin under temporary permits. This water would otherwise have been released from Lakes Buchanan and Travis. While this was beneficial, temporary permits are not sufficient replacement for water lost if releases are required.
54. Conservation incentives will not yield significant water. Reductions in water use will not result in preventing the emergency that would be created by falling reservoir levels due to the releases of stored water to irrigators under the 2010 WMP. Implementing reduced water use will likely take considerable time before the water savings identified in LCRA's DCP would be seen. Aggressive municipal conservation requires solid partnerships with customers, a good method for calculating water savings and a strong education and enforcement program; measures that are costly and take time. And, the result would be only a small amount of water supply.
55. Although groundwater appears to be available in many areas, the uncertainty associated with the long-term availability of groundwater supplies makes this a high-risk alternative for water supply. Many areas have Groundwater Conservation Districts (GCD) that regulate use and permitting of groundwater. Obtaining written agreements with landowners takes approximately 9 to 12 months and obtaining permits often takes several years.
56. LCRA has a permit for an off-channel reservoir in the lower basin that will add 90,000 AF of firm water for the region. LCRA is moving forward with constructing this reservoir, but it is not expected to be on-line until 2017.
57. The use of other LCRA lakes is not a viable option at this time. Lakes Inks, LBJ and Marble Falls are not currently authorized for municipal use. If LCRA quit refilling these lakes but allowed the lakes to be maintained at levels that would not have significant impacts to cities and industries around them, it estimates that perhaps a one-time supply of about 34,000 AF could be made available. However,

lowering the storage of these lakes could also significantly impact hydroelectric generation capabilities.

58. Several LCRA-managed lakes are cooling water reservoirs with operational constraints. Any released surface water from Lake Bastrop would need to be replenished with either surface water (including releases from Lakes Travis and Buchanan) if there is no rain, or from a limited supply of groundwater. There are operational and timing issues related to releasing and replenishing water in the lake on a schedule needed for generation reliability. Releases from other intervening lakes could raise operational issues for LCRA's firm customers over a timeframe that cannot be readily addressed.
59. LCRA is pursuing a formal amendment to its 2010 WMP but that process will not be completed in time to address LCRA's requested relief. LCRA filed an application to amend its 2010 WMP on March 12, 2012. TCEQ prepared a draft permit for LCRA comment on October 12, 2012. Notice of the application was sent to all water right holders in the Colorado River Basin and published in local newspapers in April 2013. May 28, 2013 was the last date to request a public meeting or a contested case hearing, or comment on the application. On June 3, 2013, the TCEQ Executive Director advised LCRA that he would not be forwarding the application to the Commission at this time, and that his staff would be conducting further review on the application. Staff issued a draft report with recommendations on curtailments of interruptible water on May 16, 2014, and LCRA is currently reviewing the draft report.
60. This emergency order is the only means by which LCRA can obtain timely relief to make a significant impact on its remaining storage in a workable manner.

Relief Requested

61. LCRA seeks an emergency order to suspend any obligation LCRA might have under the 2010 WMP to provide interruptible stored water to any landowners or customers within the Gulf Coast, Lakeside, and Pierce Ranch irrigation operations during the remainder of the irrigation season.

Notice

62. Notice was provided to the Governor of Texas regarding the Executive Director's consideration of this emergency order by letter dated July 23, 2014. The date and time of the hearing at which the Commission will consider whether to affirm, modify, or set aside this order is included in this emergency order under the Ordering Provisions. Notice of this emergency order and of the Commission hearing will be mailed to all water right holders in the basin.

II. CONCLUSIONS OF LAW

1. The Executive Director may issue an emergency order under Texas Water Code Section 11.139 to amend a certificate of adjudication after notice to the Governor if the Executive Director finds that emergency conditions exist which present an imminent threat to the public health and safety which requires emergency action before the Commission can take action and there are no feasible practicable alternatives to the emergency authorization.
2. The Findings of Fact show that the requirements of Conclusion of Law No. 1 have been met. Following the 2010 WMP with the ongoing drought and its effect on the water supply constitute an emergency that presents an imminent threat to the public health and safety and there are no feasible, practicable alternatives to this action. The Executive Director of the Commission has the authority to issue this emergency order.
3. The Commission must consider whether to affirm, modify, or set aside an emergency order issued by the Executive Director under Section 11.139 of the Texas Water Code no later than 20 days after the Executive Director issues the order.

NOW, THEREFORE, BE IT ORDERED BY THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. LCRA's 2010 WMP is amended to alleviate LCRA from any obligation to provide interruptible stored water to customers within the Gulf Coast, Lakeside, and Pierce Ranch irrigation operations for the duration of the emergency order.
2. This emergency order is final and effective on July 24, 2014.
3. This emergency order terminates in 120 days, November 20, 2014.
4. This emergency order may be renewed once for no more than 60 days.
5. This order only addresses the specific relief requested from LCRA and is not meant as precedent for amendments to LCRA's WMP or future emergency relief.
6. The Commission will consider whether to affirm, modify, or set aside this emergency order on August 6, 2014 at 9:30 a.m. at:


Texas Commission on Environmental Quality
12100 Park 35 Circle
Building E, Room 201S
Austin, Texas

7. If any provision, sentence, clause, or phrase of this emergency order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this emergency order.

Issue Date:

July 24, 2014

**TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY**



Richard A. Hyde, P.E.
Executive Director

ATTACHMENT A

Attachment A to this Order is LCRA's application. Please see the application at:
<http://www.tceq.texas.gov/agency/lcra-emergency-order>

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER affirming an Order issued by the Executive Director that grants a renewal of the Emergency Order issued to the Lower Colorado River Authority; TCEQ Docket No. 2014-0124-WR.

On December 10, 2013, the Lower Colorado River Authority's ("LCRA") requested an emergency order, pursuant to Texas Water Code ("TWC") § 11.139, to amend its 2010 Water Management Plan ("WMP"). Specifically, LCRA's request sought to revise the trigger dates, combined storage levels, and release amounts for providing service to LCRA's interruptible customers for first crop irrigation. The Executive Director ("ED") reviewed and granted LCRA's request by issuing an emergency order pursuant to TWC § 11.139 on January 27, 2014.

On February 12, 2014, the Texas Commission on Environmental Quality ("Commission") considered whether to affirm, modify, or set aside the ED's emergency order. After taking public comment and oral arguments, the Commission determined that it was necessary to have an evidentiary hearing held by administrative law judges ("ALJs"). On February 26, 2014, the Commission considered the ALJs' Proposal for Decision and the ED's emergency order, and determined that, given the current conditions and weather forecasts, LCRA's WMP should be temporarily amended to completely curtail LCRA's interruptible customers. The Commission further determined that because there was virtually no possibility of reaching any of the proposed trigger levels before the trigger date, there was no need to establish a trigger level. Consequently, the Commission issued an order affirming in part and modifying in part.

The emergency order was scheduled to expire on May 26, 2014. On May 22, 2014, the ED, in response to a request filed by LCRA, issued an order, pursuant to TWC § 11.139, renewing the emergency order through July 25, 2014.

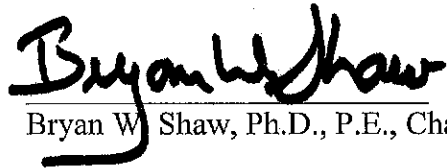
On June 4, 2014, the Commission considered whether to affirm, modify, or set aside an Order issued by the ED on May 22, 2014 that renewed the February 27, 2014 Emergency Order amending the LCRA 2010 WMP, Permit No. 5838. Based on the information before them, the Commission determined that the conditions which led to the emergency order being issued are still in existence. Consequently, the Commission affirmed the ED's Order renewing the February 27, 2014 Emergency Order granted to LCRA.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

The ED's Order, attached hereto as Exhibit A and incorporated into this Order by reference, which extends the February 27, 2014 Emergency Order amending LCRA's 2010 WMP, Permit No. 5838, is affirmed.

Issue date: **JUN 17 2014**

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

A handwritten signature in black ink, reading "Bryan W. Shaw". The signature is written in a cursive, flowing style. The first name "Bryan" is written in a larger, more prominent script, followed by "W." and "Shaw". The signature is positioned above the printed name.

Bryan W Shaw, Ph.D., P.E., Chairman

EXHIBIT A

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER granting an extension of an emergency order issued to the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to Section 11.139 of the Texas Water Code

On February 26, 2014, the Texas Commission on Environmental Quality (Commission or TCEQ) considered a request from the Lower Colorado River Authority (LCRA) for an emergency order to amend its Water Management Plan under Texas Water Code §§ 5.501, 11.138, and 11.139, and the Governor's Emergency Disaster Proclamation relating to drought. The Commission's emergency order, issued on February 27, 2014, expires on May 26, 2014. The February 27, 2014 emergency order is attached to this order as Exhibit A.

LCRA filed an application and brief for a 60-day extension of the February 27, 2014 emergency order on May 5, 2014. LCRA's extension request is attached to this order as Exhibit B. LCRA requests an extension of the February 27, 2014 emergency order through July 25, 2014.

The Executive Director has jurisdiction to consider this matter and makes the following Findings of Fact and Conclusions of Law:

I. FINDINGS OF FACT

1. The following Findings of Fact in the Commission's February 27, 2014 emergency order are incorporated by reference into this emergency order: 2-18, 20-25, 28-30, 32-34, 36, 38-42, and 44-73. The other Findings of Fact from the February 27, 2014 emergency order have not been incorporated due to the outdated nature of the information or the fact that it is not directly applicable to this order.
2. LCRA filed an application and brief for a 60-day extension of the February 27, 2014 emergency order on May 5, 2014. LCRA requests an extension of the February 27, 2014 emergency order through July 25, 2014.
3. Severe drought conditions continue in the area, including record-low inflows to the Highland Lakes, dry conditions upstream of the Highland Lakes, and low rainfall.

4. As of May 22, 2014, the combined storage of Lakes Buchanan and Travis is approximately 711,768 acre feet or 35% full.
5. Inflows to the Highland Lakes continue at record-low levels. Inflows in the first four months of 2014 are the lowest for these first four months in the historical record for the lakes, including the 1950's. The flows for those four months were only 10.3 percent of the historical average inflows for that period.
6. Monthly inflows into the Highland Lakes for this year have been 12,270, 9,489, 8,102, and 5,669 acre feet for January through April. Monthly inflows have been below average in 47 of the past 48 months.
7. As of May 1, 2014, the inflow deficit was 37 percent worse than the Drought of Record deficit reference (a requirement of declaring a Drought Worse than the Drought of Record).
8. The National Weather Service's three month lookout is for the drought to persist through July throughout the Texas Hill Country and to the west. The National Weather Service has issued an El Nino Watch, indicating that there is a greater than 50 percent chance an El Nino will develop within the next six months, which could cause a pattern of above-normal rainfall across Texas. If an El Nino develops this summer, its effects will not be felt across Texas until sometime in the fall or winter.
9. The Climate Prediction Center (CPC) monthly and seasonal outlooks call for equal chances of above, near, or below median precipitation across the central and southern Great Plains during May – July. The CPC monthly and seasonal temperature outlooks call for enhanced odds for above-normal temperatures which could intensify drought conditions.
10. LCRA's meteorologist, Bob Rose, expects a pattern of hotter than normal temperatures and below normal rainfall during June through August.
11. If severe drought conditions continue, the criteria for declaration of a Drought Worse than the Drought of Record may be met as early as June, 2014. There is a 38 percent chance that a DWDR will be declared by the end of October 2014.
12. The Governor of Texas issued an Emergency Disaster Proclamation on July 5, 2011, certifying that exceptional drought conditions posed a threat of imminent disaster in specified counties in Texas. This proclamation has been renewed monthly, most recently on May 9, 2014, and includes nearly all of the counties that contribute flows into or contain the Highland Lakes. These counties are in severe to extreme drought.
13. There is uncertainty as to what obligation LCRA may have to provide interruptible stored water after expiration of the February 27, 2014 emergency order. In May, crops that were started with groundwater could be switched to

surface water. LCRA may receive requests for water for supplemental uses such as row crops and later, for wildlife management. During a curtailment year, those requests are only considered if water is available in the canal system.

14. Notice regarding the Executive Director's consideration of this order was provided to the Governor of Texas by letter dated May 21, 2014.

II. CONCLUSIONS OF LAW

1. The Commission may issue an emergency order under Texas Water Code § 11.139 to amend a certificate of adjudication after notice to the Governor if the Commission finds that emergency conditions exist which present an imminent threat to the public health and safety and which override the necessity to comply with established statutory procedures and there are no feasible practicable alternatives to the emergency authorization. The order may be issued for 120 days, and may be extended for 60 days.
2. The Executive Director may issue an emergency order pursuant to Texas Water Code § 11.139 after notice to the Governor if an imminent threat to the public health and safety exists which requires emergency action before the Commission can take action and there are no feasible alternatives. The Executive Director can extend the order for 60 days.
3. A hearing to affirm, modify, or set aside the order for extension of the initial emergency order must be held by the Commission as soon as practicable, but not later than 20 days after the extension to the emergency order is granted.
4. The Findings of Fact in this order, including those Findings of Fact incorporated from the Commission's February 27, 2014 emergency order, show that the requirements of Texas Water Code § 11.139 continue to be met. Following the 2010 Water Management Plan with the ongoing drought and its effect on the water supply constitute an emergency that presents an imminent threat to the public health and safety. There are no practicable alternatives to this action.
5. Because conditions have remained the same or worsened since the Commission issued its emergency order on February 27, 2014, renewal of this emergency order is appropriate under the facts and the law.
6. A Commission hearing to affirm, modify, or set aside this order extending the February 27, 2014 emergency order will be held on June 4, 2014.

**NOW, THEREFORE, BE IT ORDERED BY THE EXECUTIVE
DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL
QUALITY THAT:**

1. The February 27, 2014 emergency order amending LCRA's Water Management Plan, Permit No. 5838, is extended through July 25, 2014.
2. This order extending the February 27, 2014 emergency order was issued without a hearing. A hearing to affirm, modify, or set aside this order extending the February 27, 2014 emergency order will be held before the Commission on June 4, 2014 at 9:30 a.m. The location of the hearing will be:

Texas Commission on Environmental Quality
12100 Park 35 Circle
Building E, Room 210S
Austin, Texas

3. The Chief Clerk of the Commission shall forward a copy of this order to all parties.
4. If any provision, sentence, clause, or phrase of this order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this order.

Issue Date:

May 22, 2014

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

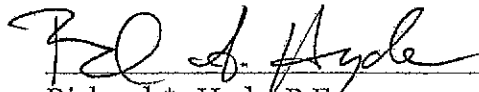

Richard A. Hyde, P.E.
Executive Director

EXHIBIT A

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER affirming in part and modifying in part the Executive Director's emergency order authorizing the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to section 11.139 of the Texas Water Code; TCEQ Docket No. 2014-0124-WR; SOAH Docket No. 582-14-2123

On January 27, 2014, the Executive Director (ED) of the Texas Commission on Environmental Quality (TCEQ or Commission) granted an application by the Lower Colorado River Authority (LCRA) for an emergency order to amend its 2010 Water Management Plan (WMP), Permit No. 5838, under Texas Water Code §§ 5.501, 11.138, and 11.139, and the Governor's Emergency Disaster Proclamation relating to drought. On February 12 and 26, 2014, the Commission considered whether to affirm, modify, or set aside the emergency order that the ED granted. A proposal for decision (PFD) was presented by William G. Newchurch and Travis Vickery, Administrative Law Judges (ALJs) with the State Office of Administrative Hearings (SOAH), who conducted a hearing concerning the application on February 12, 17, and 18, 2014, in Austin, Texas.

After considering the ALJs' PFD, the Commission adopts Findings of Fact and Conclusions of Law and affirms in part and modifies in part the Executive Director's emergency order, as set out below:

I. FINDINGS OF FACT

1. On December 10, 2013, LCRA filed a request for an emergency order to amend its 2010 WMP to change requirements for the release of water to irrigation operations downstream in 2014 due to persistent drought conditions in LCRA's five Highland Lakes (Lakes Buchanan, Inks, LBJ, Marble Falls, and Travis). LCRA requested the authority to provide no interruptible stored water to its Gulf Coast and Lakeside Divisions and Pierce Ranch if the combined storage of Lakes Buchanan and Travis is below 1.1 million acre feet (AF). Additionally, it requested the stored water releases be smaller for combined storage levels above 1.1 million AF than those set forth in the 2010 WMP.
2. LCRA has not requested authorization to reduce the amount of water provided from Lakes Buchanan and Travis specifically for instream flow and freshwater inflow purposes below the levels required, in the absence of an emergency order, in the 2010 WMP.

LCRA'S Water Rights and 2010 Water Management Plan

3. LCRA has the right to divert and use up to 1.5 million AF from Lakes Buchanan and Travis under Certificates of Adjudication Nos. 14-5478 and 14-5482. By court order, LCRA has developed a WMP, Permit No. 5838, currently dated 2010, which is part of LCRA's Water Rights and is required by these certificates.
4. The Certificates of Adjudication and the 2010 WMP govern LCRA's operation of Lakes Buchanan and Travis and dictate how LCRA makes water available from these lakes to help meet "firm" water customer needs, downstream interruptible irrigation demands, and environmental flow needs of the lower Colorado River and Matagorda Bay.
5. Certificates of Adjudication Nos. 14-5478 and 14-5482 state that "LCRA shall interrupt or curtail the supply of water . . . pursuant to commitments that are specifically subject to interruption or curtailment, to the extent necessary to allow LCRA to satisfy all demand for water under such certificates pursuant to all firm, uninterruptible water commitments." The WMP further describes how LCRA will manage and curtail supplies from the lakes during times of drought including through a repeat of the Drought of Record.
6. As established in the 2010 WMP, the combined firm yield of Lakes Buchanan and Travis is 535,812 acre feet per year (AFY). Of this amount, 90,546 AFY is committed to O.H. Ivie Reservoir, making 445,266 AFY of firm water supply available from Lakes Buchanan and Travis for LCRA's firm water customers.
7. As established in the 2010 WMP, until firm demand for water equals the combined firm yield, LCRA can supply water for irrigated agriculture on a limited basis. The maximum historical annual amount of reported firm water use from the firm supplies of Lakes Buchanan and Travis during 2000 through 2010 was 247,000 AF in 2011. The maximum interruptible water released from Lakes Buchanan and Travis during this same period occurred in 2011 and totaled about 433,000 AF. The maximum total amount released or used from the Highland Lakes, about 714,000 AF, occurred in 2011.
8. The firm water use by LCRA firm customers in 2012 from Lakes Buchanan and Travis was about 148,000 AF. An amount of 31,000 AF was supplied for the environment, and 9,000 AF of interruptible was supplied to farmers in the Garwood Irrigation Division. The total use for 2012 was about 188,000 AF. The firm water use by LCRA firm customers in 2013 from Lakes Buchanan and Travis was about 173,500AF; about 33,500 AF was supplied for the environment; and about 22,000 AF was supplied for the Garwood Irrigation Division. The total use in 2013 was about 229,000 AF.
9. To manage the supply, LCRA's 2010 WMP imposes several trigger points keyed to the total combined storage capacity of Lakes Buchanan and Travis that are intended to ensure the firm water supply is protected during droughts. The most relevant trigger points are set out in the following table:

Combined Storage of Lakes Buchanan and Travis	Date on Which Trigger is Decided	Action Taken
1.4 million acre feet	At any time	Request firm customers to implement voluntary drought response measures.
1.4 million acre feet	On Jan. 1	Environmental releases for instream flows reduced to meet critical needs for ecosystems for following year. Begin gradual curtailment of interruptible supply to four major irrigation operations.
900,000 acre feet	At any time	Request firm customers to implement mandatory water restrictions; develop firm customer curtailment plan.
600,000 acre feet	At any time	If criteria indicate a drought worse than the Drought of Record, then cease interruptible supply and begin curtailment of firm supply.

10. LCRA's 2010 WMP defines "Drought of Record" as "the drought that occurred during the critical drought period." "The Critical Drought Period" is defined as "the period of time during which the reservoir was last full and refilled, and the storage content was at its lowest minimum value."
11. Under the 2010 WMP, the LCRA Board may declare a Drought Worse than the Drought of Record (DWDR) if it finds that the following three conditions are simultaneously met:
 - a. Duration of drought is more than 24 months, which is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full;
 - b. Inflows to the lakes are less than inflows during the drought of record; and
 - c. Lakes Buchanan and Travis combined storage has less than 600,000 AF of water.
12. Under the 2010 WMP, once a drought has lasted more than 36 months and a DWDR has been declared by the LCRA Board, the interruptible stored water would be fully and immediately curtailed – making no stored water available for agricultural irrigation or other interruptible uses until lake levels recover or the inflows into the lakes increase substantially. Moreover, LCRA will implement pro rata curtailment of its firm water users once a DWDR is declared and after interruptible stored water (agriculture) uses have been curtailed.
13. Prior to a declaration of a DWDR, LCRA is obligated by the 2010 WMP to provide at least some interruptible water to its four major irrigation operations.

Current Conditions

14. The combined storage of Lakes Buchanan and Travis on December 1, 2013, was 746,000 AF, or 37% full. On February 1, 2014, the combined storage was 764,000 AF, or 38% full. The combined storage fell to the lowest level in the current drought on September 19, 2013, which was 637,123 AF or 31.7% full.
15. The primary factors affecting the current combined storage levels have been (1) unprecedented low inflows in this current drought, (2) the interruptible stored water amounts authorized for release under current LCRA 2010 WMP, particularly in 2011, and (3) emergency orders issued by the Commission in 2012 and 2013.
16. It is not merely the amount of inflows, but also the management of the system over a multiyear period that greatly affects the lakes' combined storage. In recent years, emergency orders departing from the 2010 WMP have proven critical to that management.
17. On September 19, 2013, the combined storage of these reservoirs fell to the second lowest point in the history of these lakes—637,000 AF—nearing 30% capacity and just shy of the record low at 621,000 AF. Thus in September the lakes rapidly approached the 600,000 AF emergency level at which point the LCRA Board would have declared a DWDR. Continuing to curtail interruptible stored water releases under the exceptional circumstances presented by this drought, which would drive lake storage below 600,000 AF is critical to avoiding both an imminent threat to public health and safety and a situation whereby interruptible water supply releases would force declaration of a DWDR and drive firm customers into curtailment.
18. The inflows into the lakes are at record lows. Annual inflows into Lakes Buchanan and Travis in four of the last five years are among the ten lowest years of inflow on record. Inflows into the lakes in 2011 were the lowest annual inflows on record, about 10% of average inflows. Inflows in 2012 were the fifth lowest on record, and inflows in 2013 were the second lowest on record. January 2014 inflows of 11,763 AF were the lowest since the 1950's.
19. The inflows into Lakes Buchanan and Travis during the current drought have been lower for time periods ranging from 12 months to 72 months than the lowest inflows for periods of similar duration during the historic Drought of Record. The total inflows for the past 72 months were only about half of the lowest 72 month inflow period in the Drought of Record.
20. A ranking of the top ten lowest calendar year historical inflows since the reservoirs went into operation in the early 1940's shows that five of those years—2008, 2009, 2011, 2012 and 2013 occur in the current drought, and the top three years for lowest inflows—2011, 2013, and 2008 are all from the current drought. The recent year of 2006 is the fourth lowest.

21. The inflows for January 2014, at 11,763 AF, are lower than the inflows in either January 2011 (21,158 AF) or 2013 (15,117 AF), which are the two lowest inflow years on record. Historically a January with low inflows is usually followed by low inflows for both February and March. This data indicates a high likelihood of drought persistence in the near future.
22. Extraordinary drought conditions in the form of rainfall and extreme heat have existed in much of Texas, including the Colorado River Basin for nearly three years. State Climatologist, Dr. John Nielsen-Gammon, recognized 2011 as the worst one year statewide drought on record. 2011 was the second hottest year statewide, and was the hottest summer on record for both Austin and Texas. Year 2012 tied with 1921 as the hottest on record statewide.
23. Annual evaporation from LCRA's five Highland Lakes plus Lake Austin for 2010 through 2013 is set forth below:

Year	Total Evaporation
2010	183,923 acre feet
2011	192,404 acre feet
2012	144,759 acre feet
2013	120,899 acre feet

24. Although there has been close to normal rainfall in some places in Central Texas since 2011, these events have failed to produce significant inflows into Lakes Buchanan and Travis. The rainfall has been sporadic, and the soils have not remained saturated enough to allow for runoff in substantial amounts. Widespread heavy rains in the past few months have failed to produce significant inflows into the lakes.
25. This low inflow total is symptomatic of the drought's severity, including dry soils that absorb most of the rainfall that does occur. For example, heavy, widespread rainfall in the Llano River and San Saba River watersheds above the Highland Lakes on September 19 and 20, 2013, averaged two to three inches with some rain gages reporting totals as high as six or seven inches. However, this rain event only yielded approximately 24,000 AF of inflow to the lakes. By comparison, an event in March 2007 with about 40% less rainfall yielded almost 100,000 AF of inflows to Lakes Buchanan and Travis.
26. The weather forecasts do not indicate significant rainfall in the near future. Recent atmospheric and oceanic observations continue to indicate ENSO-neutral conditions and the outlook calls for this to persist into summer of 2014. The latest National Weather Service precipitation forecast indicates that precipitation across the Texas Hill Country is likely to remain normal with equal chances for above, below, or near normal precipitation. These forecasts indicate that the western edge of a below-average precipitation forecast area encroaches on Central Texas. This boundary does not quite reach areas which could produce significant inflows to Lakes Buchanan and Travis. It is not expected that precipitation will be heavy enough to cause significant drought improvement.

27. The most recent U.S. Seasonal Drought Outlook indicates the persistence of drought conditions above Lakes Buchanan and Travis through the end of April 2014. It is not expected that precipitation will be heavy enough to cause significant drought improvement. Climatological outlooks also indicate that temperatures will trend above normal through the summer, which tends to correlate with higher evaporation rates and lower overall precipitation.
28. The hydroclimatic conditions outlined above have created a circumstance where Lakes Buchanan and Travis have been unable to recover in any significant manner, even with an emergency cutoff of nearly all water supply for downstream irrigation in 2012 and 2013.
29. The first and second criteria for declaring a DWDR have been met. The drought has lasted for more than 24 months. Duration of drought for purposes of a DWDR declaration is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full, which was February 13, 2005. The cumulative inflow deficit criterion has also been met.
30. The current drought conditions are outside the range of hydrologic conditions that were considered during formulation of the 2010 WMP.
31. The Governor of Texas issued an Emergency Disaster Proclamation on July 5, 2011, certifying that exceptional drought conditions posed a threat of imminent disaster in specified counties in Texas. This proclamation has been renewed monthly, most recently on February 14, 2014, and includes nearly every county bordering or that contributes inflow to the Highland Lakes. These areas are in severe drought or worse. The Emergency Disaster Proclamation also states that "As provided in Section 418.016 of the [Texas Government Code], all rules and regulations that may inhibit or prevent prompt response to this threat are suspended for the duration of the state of disaster."

LCRA's Firm Customers

32. LCRA provides raw water out of the combined firm yield of Lakes Buchanan and Travis to over 60 retail and wholesale potable water suppliers that together serve over one million people. In addition, LCRA provides water to several electric utilities from the firm water supply of Lakes Buchanan and Travis. These electric utilities provide electricity into the electrical grid in Texas operated by the Electric Reliability Council of Texas (ERCOT) and provide electricity to customers in Texas. LCRA also provides firm raw water to several industries located downstream.
33. The 2010 WMP requires that firm customers (mainly cities and industries) be curtailed on a pro rata basis and that LCRA cease all releases for interruptible stored water (regardless of the impact on the crops) when a DWDR is declared.
34. If LCRA is required to follow the 2010 WMP and the drought continues, LCRA and its firm customers may need to acquire or develop large quantities of alternative water supplies to meet essential needs of their respective potable water systems. LCRA's firm customers are working on plans to implement curtailment and secure alternative supplies;

however many of LCRA's firm customers do not have any readily available alternative sources of water supply that could substitute for their reliance on the Colorado River, and these projects could take years to develop.

35. If LCRA is required to follow the 2010 WMP and the drought continues, LCRA will almost certainly have to:
 - a. Begin releases of interruptible stored water to meet demands in the four irrigation operations for the 2014 crop;
 - b. Probably reach the third (and final) criteria for DWDR conditions;
 - c. Declare a DWDR;
 - d. Cut off stored water for interruptible contracts, thereby ruining the crop already planted; and
 - e. Curtail cities' and industries' water use by 20% or more.
36. Curtailments that would occur if combined storage drops substantially will result in reduced water supply to power plants, threatening their ability to generate electricity. Because LCRA's firm water customers would be required to cut back substantially if the drought persists under a DWDR declaration, municipal customers are likely to be forced to institute drought response measures that would include restrictions on indoor water use, resulting in threats to public health and safety.
37. Based on recent lake levels and the forecast, there is a chance of reaching conditions triggering a declaration of a DWDR as soon as May 2014 and greater than a one in two chance by late August.
38. In September 2013 the lakes came within 37,000 acre-feet of reaching the emergency level of 600,000 AF or 30% capacity and there has been very little recovery since then. In May 2012 the lakes refilled to an amount close 1.1 million AF (to 1.033 million AF on May 22, 2012) and yet without any release to Lakeside, Gulf Coast and Pierce Ranch the lakes dropped to the second lowest level on record of 637,000 AF on September 19, 2013, and came very close to falling below emergency levels. An emergency order in place in 2012 prevented such a release.
39. Water savings by Austin of an estimated 86,000 AF over the past two years played a key role in preventing combined storage from reaching the 600,000 AF level in September 2013.
40. The extraordinary magnitude of change in inflows since the drought of record upon which the 2010 WMP is based, in terms of how much lower the inflows have been in recent years, signals the need for great caution to be taken with regard to decisions concerning large releases to interruptible customers because they make it more probable that lake levels will not quickly recover once such releases occur.

41. Currently, LCRA owns four water systems that take raw water from Lakes Buchanan and Travis. LCRA also has 15 firm water customers that actively take raw water for municipal purposes from Lake Travis that are not a part of LCRA's utility facilities. The lowest pumping elevations of the intakes range from 555 feet mean sea level (msl) to 650 feet msl on Lake Travis. On January 9, 2014, the lake level at Travis was 628.45 msl. On February 15, 2014, the lake level at Lake Travis was 627.75 msl.
42. The lowest operating depths of the following raw water intakes owned and operated by LCRA's firm water customers on Lake Travis are as follows:
- Brushy Creek Regional Utility Authority (BCRUA) = 620 ft-msl
 - Cedar Park (regular intake) = 615 ft-msl
 - Leander (regular intake) = 615 ft-msl
 - Lago Vista (Intake #1) = 612 ft-msl
 - Lago Vista (Intake #2) = 600 ft-msl
 - Jonestown WSC = 600 ft-msl
 - WCID 17 = 595 ft-msl
 - Lakeway MUD = 590 ft-msl
 - Cedar Park and Leander (joint emergency drought intake) = 590 ft-msl
43. In the absence of an emergency order, the raw water intakes owned and operated by LCRA's firm water customers on Lake Travis are projected to become inoperable as early as the following dates:
- BCRUA = already inoperable and will remain inoperable
 - Cedar Park (regular intake) = inoperable by June 2014
 - Leander (regular intake) = inoperable by June 2014
 - Lago Vista (Intake #1) = inoperable by July 2014
 - Lago Vista (Intake #2) = inoperable by August 2014
 - Jonestown WSC = inoperable by August 2014
 - WCID 17 = inoperable by October 2014
 - Lakeway MUD = inoperable by December 2014
 - Cedar Park and Leander (joint emergency drought intake) = inoperable by December 2014.
44. The Windermere Oaks Water Supply Corporation (WOWSC) uses an intake barge to pump raw water from Lake Travis for its customers under an LCRA firm water contract. Although WOWSC has already modified its intake structure to operate in shallower water, lake level elevations of 618 ft- msl or lower present significant operating challenges. Groundwater is not feasible alternative water supply for WOWSC.
45. As lake levels drop, retail water suppliers are unable to pump water from the lakes. This causes wholesale raw water customers to either move intakes to reach the water, or obtain alternative sources. Smaller systems will likely have to haul water from a water utility with a viable source. If the lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, LCRA water systems and its customers' water systems will have difficulty in meeting firm customers' water needs.

46. Low lake levels in Lake Travis have a direct impact on the ability of local emergency services personnel to fight structure fires and wildfires that may occur. In 2011, the Perdarnales Fire Department, which serves western Travis County and relies primarily upon water from Lake Travis, was able to draft water from Lake Travis at multiple locations on the lake. As of February 17, 2014, the Fire Department had access to only one reliable water source at the lake. With these limitations, the Fire Department has experienced 45-minute turnaround times for trucks to bring water to a fire, and it has had to stop fighting a fire due lack of water in its trucks or helicopters. These circumstances constitute a current threat to the health and safety of residents served by the Perdarnales Fire Department.
47. Combined storage levels are a strong indicator of an imminent threat to the public health and safety. However, given the rapid rise and fall of combined storage levels throughout the historical record, combined storage levels, in and of themselves, are insufficient to determine whether an imminent threat to the public health and safety exists.

Conservation and Drought Contingency Plan

48. LCRA's water conservation plan complies with TCEQ rules. LCRA has required its municipal customers to adopt conservation plans before there was a state requirement.
49. LCRA provides conservation program planning support for its customers. In 2012, LCRA began a rebate program for certain irrigation technologies and a wholesale customer cost-share program focused on conservation. LCRA has supported significant improvements in water use efficiency in rice irrigation systems, including volumetric pricing and canal rehabilitation.
50. LCRA was originally required to develop a Drought Contingency Plan (DCP) as a direct result of the court order adjudicating LCRA's water rights and the Texas Water Commission 1989 WMP Order.
51. When TCEQ adopted the Chapter 288 rules for DCPs, LCRA adopted separate stand alone DCPs relating to irrigation, municipal, and industrial operations that more specifically addressed the requirements of the Chapter 288 rules. LCRA incorporated all of the same triggers and criteria from the WMP into its Chapter 288 DCP. These DCPs were incorporated into Chapter 4 of the WMP.
52. LCRA adopted water use reduction targets including the following: water use reduction goals for firm water supply customers of 5 percent by asking firm customers to implement their voluntary water use reduction measures when the combined storage of Lakes Buchanan and Travis is less than 1.4 million AF; ten to twenty percent reduction goals by asking firm customers to implement their own mandatory water use reduction measures when combined storage levels fall below 900,000 AF; and a mandatory pro rata curtailment of firm water supplies for customers of 20 percent or more will be implemented when combined storage levels fall below 600,000 AF and other criteria are met for a drought more severe than the Drought of Record.

53. In August, 2011, LCRA called on its firm water customers to voluntarily implement mandatory water use restrictions under their DCPs to reduce water use by 10 to 20 percent.
54. LCRA has adopted additional changes to LCRA's raw water contract rules that include the procedures for implementing a pro rata curtailment of firm water customers. The rules also provide a surcharge to be set by the LCRA Board for unauthorized use of water (taking more water than authorized under a mandated curtailment of firm water supplies) and clarifying the drought contingency requirements related to golf course irrigation and recreational use.
55. LCRA's WMP requires LCRA to develop a stored water curtailment plan to be approved by the LCRA Board and TCEQ in response to combined storage dropping below 900,000 AF. TCEQ approved that plan for LCRA's firm customers in December of 2011.
56. LCRA has fully implemented its DCP. It requires all of its customers that currently divert and purchase water from LCRA to have a DCP. Most of these firm customers have stayed in some form of mandatory water restrictions, significantly limiting landscape irrigation. LCRA's industrial customers have worked to reduce non-essential water uses. Also, LCRA has had several meetings with firm customers in preparation for pro rata curtailment.
57. The LCRA Board approved a no more than once per week watering restriction that would take effect in March 2014 if combined storage is below 1.1 million AF and interruptible stored water to the Gulf Coast and Lakeside irrigation divisions and Pierce Ranch has been cut off. LCRA has not requested TCEQ approval of this action and this order does not address such action.
58. Just in the past 2 years Austin's conservation and drought measures have resulted in an estimated 86,000 AF savings. Austin hired outside consultants and participated in a rigorous process with LCRA to determine its annual conservation savings in preparation for possible pro-rata curtailment. This resulted in an estimated savings of 26,000 AF a year from conservation measures in place (52,000 in two years). In addition Austin has calculated its savings achieved from imposing drought measures for more than two years which includes a one-day a week watering schedule. This is estimated at 17,000 AF per year (34,000 AF in two years).
59. There has been a drop from Austin's highest recent year of 190 GPCD, in 2006, to the most recent year of 136 GPCD due to its conservation and drought measures.
60. Because the planning, permitting, and construction for developing large new water supplies for Austin and other large municipal areas is necessarily on a decades-long timeframe, a severe shortage in or total depletion of the already diminished supply within a few years due to an imminent release of interruptible stored water under LCRA's 2010 WMP is an imminent threat to public health and safety.
61. Health and safety consequences from supply shortages can start to be experienced long before a municipal water supply is totally depleted.

62. Water restrictions result in a drop in overall usage, which in turn impacts the amount of flow in the entire Austin Water Utility (AWU) system. The AWU system has more than 3,700 miles of water pipes and 39 storage tanks, which are designed to handle peak demands and fire flows. As flow decreases, AWU system's ability to handle peak demands and fire flows may be affected, which is an imminent threat to public health and safety.
63. Once combined storage levels have reached a point that will require Austin and other LCRA firm water customers, as a practical measure, to impose water rationing, then individual households will start to make choices in how to use that rationed amount of water. Over a vast population, some of those choices can be poor choices with regard to sanitation practices (for example deferring for too long certain sanitary uses of water) that can negatively impact public health and safety despite a utility's effort to educate its customers on safe practices.
64. Outdoor watering in a drought is critical to preserving trees and tree canopy important to human health in an urban environment, preventing home foundations from cracking, and avoiding negative health effects from landscaping dying off.

Alternatives

65. LCRA has evaluated many alternatives to address the emergency conditions that the drought presents. Alternatives explored include: Utilizing water from LCRA's other lakes, aggressive conservation, securing the Garwood right for purposes other than agriculture, interbasin transfers, and trucking in water from other sources. LCRA has evaluated many other alternatives to address the emergency conditions that the drought presents.
66. None of the alternatives LCRA has identified would avert the projected water supply shortage because most of the supplies identified would produce insufficient or uncertain quantities of supply, would create other operational issues for customers, may involve a lengthy permitting process (if not implemented on an emergency basis), or would take years to develop. None of the alternatives identified are feasible or practicable alternatives to the emergency authorization.
67. Amending downstream run of the river rights to allow diversion for new uses and at new locations would provide some supply, but the use of these rights alone is not – by itself – a feasible and practicable alternative to the emergency relief related to the 2010 WMP. All of the rights would require amendments to add diversion points, additional places of use, and possible storage. Also, the downstream run-of-river water rights are highly variable in terms of availability and quantity, and do not provide by themselves a sufficient quantity of water to eliminate the need for the emergency relief from the 2010 WMP as requested herein.
68. In 2012, LCRA supplied about 4,000 AF to firm customers downstream of Austin under temporary permits that would otherwise have been released from Lakes Buchanan and Travis. In 2013, LCRA supplied about 1,000 AF to such customers under such

temporary permits. While this was beneficial, temporary permits are not sufficient replacement for water lost if releases are required.

69. A twenty percent reduction in water use by firm customers will require difficult measures. There may be dramatic reductions in outdoor water use. However, none of these measures will occur quickly enough to help lake levels. Some LCRA customers, such as Austin, have achieved water savings through reductions in water use. Most industrial customers would have to implement the full twenty percent reduction more immediately and this likely means a curtailment in annual production.
70. LCRA is pursuing a formal amendment to its 2010 WMP but that process will not be completed in time to address LCRA's requested relief. LCRA filed an application to amend its 2010 WMP on March 12, 2012. TCEQ prepared a draft permit for LCRA comment on October 12, 2012. Notice of the application was sent to all water right holders in the Colorado River Basin and published in local newspapers in April, 2013. May 28, 2013, was the last date to request a public meeting or a contested case hearing, or comment on the application. On June 3, 2013, the ED advised LCRA that he would not be forwarding the application to the Commission at this time, and that his staff would be conducting further review on the application.
71. There is no feasible practicable alternative for Austin on short order to replace its water supply should it be depleted in a few years to the point of drastic shortages by large interruptible water releases during a period of record low inflows. Although Austin has made very earnest efforts to identify alternative water supplies, a replacement water supply for 1 million people cannot be identified and developed in a few years. Austin has identified only very small amounts of water that may be able to be purchased for exorbitantly expensive prices. The small amounts do not sufficiently address the health and safety risks and the exorbitant prices do not make these practicable alternatives.
72. An interruptible stored water curtailment trigger should be set to avert, rather than create, conditions that could require declaration of a DWDR.
73. LCRA staff performed analyses to determine whether lesser amounts of combined stored water than 100,000 AF could be supplied to Gulf Coast, Lakeside, and Pierce Ranch at lower combined storage trigger levels. The results showed that these alternatives were not practicable because the small amount of water that could be made available would result in significant losses and difficulties maintaining the canal water levels for the movement of water.

Relief Requested

74. LCRA's requested curtailment approach for 2014 is more restrictive than the curtailment triggers in emergency orders issued by the Commission in 2012 and 2013. The 850,000 AF trigger in effect in 2012 and 2013 was based on avoiding the potential for dropping below 600,000 AF during the first crop of the season. Under LCRA's current approach, before the releases for interruptible water users are made, LCRA requests a combined storage trigger increase to a level that puts off the possibility of storage falling below 600,000 AF until spring of 2015.

75. LCRA has determined that if the combined storage is less than 1.1 million AF, providing even some stored water releases to Gulf Coast, Lakeside, and Pierce Ranch operations amplifies the risk of a DWDR declaration before spring 2015.
76. LCRA requests TCEQ to issue an emergency order to deviate from the 2010 WMP as it pertains to the determination of interruptible supply for 2014 and instead provide interruptible stored water based on the combined storage of Lakes Buchanan and Travis on March 1, 2014 at 11:59 p.m. as follows:
- a. Provide no interruptible stored water to customers within the LCRA Gulf Coast and Lakeside Divisions and Pierce Ranch if combined storage is below 1.1 million AF;
 - b. Provide up to 100,000 AF of interruptible stored water for diversion by customers within LCRA's Gulf Coast and Lakeside Divisions and Pierce Ranch if combined storage is at or above 1.1 million AF but below 1.2 million AF;
 - c. Provide up to 124,000 AF of interruptible stored water for diversion by customers within LCRA's Gulf Coast and Lakeside Divisions and Pierce Ranch if combined storage is at or above 1.2 million AF, but below 1.3 million AF;
 - d. Provide up to 148,000 AF of interruptible stored water for diversion by customers within LCRA's Gulf Coast and Lakeside Divisions and Pierce Ranch if combined storage is at or above 1.3 million AF but below 1.4 million AF; and
 - e. Provide up to 172,000 AF of interruptible stored water for diversion by customers within LCRA's Gulf Coast and Lakeside Divisions and Pierce Ranch if combined storage is at or above 1.4 million AF.
77. LCRA will also provide interruptible stored water to the Garwood Irrigation Division and Pierce Ranch, to the extent required by their contracts.

Notice to the Governor

78. Notice regarding the ED's consideration of this emergency order was provided to the Governor of Texas by letter dated January 23, 2014.

Procedure

79. On January 23, 2014, LCRA filed with the ED a supplement to its request for an emergency order.
80. On January 27, 2014, the ED considered LCRA's December 10, 2013 request and January 23, 2014 Supplement and issued an order granting an emergency authorization to the LCRA to amend its WMP, Permit No. 5838, pursuant to section 11.139 of the Texas Water Code.

81. The January 27, 2014 ED's Emergency Order included notice that the Commission would hold a hearing on February 12, 2014, to affirm, modify, or overturn the Order.
82. On January 24, 2014, the Chief Clerk of the Commission mailed notice of the Commission's February 12, 2014 hearing as required by law. The mailed notice stated: "Under 30 Tex. Admin. Code § 295.174, there is no right to a contested case hearing on this emergency order."
83. On February 10, 2014, LCRA submitted a second supplement to its request for emergency authorization.
84. On February 12, 2014, the Commission convened a public hearing on this matter, Chairman Shaw presiding. Commissioner Baker participated. Commissioner Covar recused himself. ALJ Newchurch was present throughout the public hearing, at the Commission's request.
85. The Commission and ALJ Newchurch heard over four hours of unsworn public comments about the Executive Director's Emergency Order. At the end of the public comment, the Commission discussed the matter with ALJ Newchurch and offered their preliminary view on the matter. The Commission then voted to refer the matter to SOAH for an evidentiary hearing to convene immediately. They also instructed ALJ Newchurch to submit a PFD to the Commission no later than February 21, 2014. The Commission stated that consideration of the PFD would be on its February 26, 2014 agenda.
86. ALJs Newchurch and Vickery reconvened the hearing on February 12, 2014. They admitted parties and other procedural matters were considered.
87. The following are parties in this case:

PARTY	REPRESENTATIVE
Lower Colorado River Authority (LCRA)	Lyn Clancy & Greg Graml
Executive Director (ED) of the TCEQ	Robin Smith
Office of Public Interest Counsel (OPIC)	Blas Coy & Vic McWherter
City of Austin	Ross Crow & Mary K. Sahs
Colorado Water Issues Committee (CWIC)	Carolyn Ahrens & Michael J. Booth
Central Texas Water Coalition (CTWC)	Cynthia C. Smiley, Shana Horton, & Frank Cooley
Highland Lakes Firm Water Customer Cooperative (Highland)	Patricia Carls & Carla Connolly
Texas Parks & Wildlife Department (TPWD)	Collette Baron Bradsby & James B. Murphy
National Wildlife Federation (NWF)	Myron Hess
Lehner/Lewis Interests & Garwood Irrigation (Garwood)	Molly Cagle & Samia Rogers
Clive Runnells d/b/a AP Ranch (AP Ranch)	Charles W. Irvine & Mary Carter

88. LCRA paid the cost of transcribing the hearing and expediting delivery of the transcript, and has not asked for any part of that cost to be allocated among the other parties.

II. CONCLUSIONS OF LAW

1. The ED may issue an emergency order under Texas Water Code § 11.139 to amend a permit or certificate of adjudication for 120 days after notice to the Governor if the ED finds that emergency conditions exist which present an imminent threat to the public health and safety which requires immediate action before the Commission can take action and there are no feasible practicable alternatives to the emergency authorization.
2. The Commission may issue an emergency order under Texas Water Code § 11.139 to amend a permit or certificate of adjudication for 120 days after notice to the Governor if the Commission finds that emergency conditions exist which present an imminent threat to the public health and safety and which override the necessity to comply with established statutory procedures and there are no feasible practicable alternatives to the emergency authorization.
3. LCRA is obligated under a 1988 court order and Certificates of Adjudication Nos. 14-5478 and 14-5482 to meet the demands of its firm, non-interruptible water supply customers 100% of the time without shortage through a repeat of the conditions in the Drought of Record.
4. The Findings of Fact show that the requirements of Texas Water Code § 11.139 have been met. Following the 2010 Water Management Plan with the ongoing drought and its effect on the water supply constitute an emergency that presents an imminent threat to the public health and safety. There are no practicable alternatives to this action.
5. The ED had the authority to issue the Emergency Order.
6. The Commission must consider whether to affirm, modify, or set aside an emergency order issued by the ED under Section 11.139 of the Texas Water Code no later than 20 days after the ED issues the order.
7. LCRA has the burden of proving that an emergency order should be granted.
8. The Commission in issuing an emergency order under Texas Water Code § 11.139 must ensure that the relief granted is adequate and tailored to address the imminent threat to public health and safety.
9. LCRA's application for an emergency order should be granted in part and the ED's Emergency Order should be affirmed in part and modified in part as set out below.
10. LCRA should pay the full cost of transcribing the hearing in this case.

11. By entering this order, the Commission is not construing in any way either the 1987 Agreement or the 1998 Purchase Agreement between LCRA and Garwood Irrigation Company. Nothing in this Order shall be considered or construed in any way to support one construction or another of the 1987 Agreement and the 1998 Purchase Agreement between LCRA and Garwood Irrigation Company.

III. EXPLANATION OF CHANGES

1. As directed by the Commission at its February 26, 2014 agenda, the Office of the General Counsel has made the necessary revisions to the ALJs' Proposed Order to effectuate the Commission's decision. Specifically, Findings of Fact, Conclusions of Law, and Ordering Provisions have been renumbered to reflect the Commission's revisions to the ALJs' Proposed Order. Thus, references in this section to Findings of Fact, Conclusions of Law, and Ordering Provisions refer to the provisions as renumbered by the Office of the General Counsel, except with respect to stricken provisions. In instances where this section references stricken provisions, the original numbering of the provisions by the ALJs in their Proposed Order is utilized.
2. On February 26, 2014, the ALJs distributed a letter with the ALJs' recommendations with respect to the parties' exceptions to their proposal for decision. In their presentation, the ALJs explained that these recommended revisions to their Proposed Order were supported by the evidence in the record. Accordingly, the Commission made the following revisions to the ALJs' proposed order: 1) Finding of Fact No. 3 is revised, as requested in the ED's exceptions; 2) Findings of Fact Nos. 8, 17, 29, 39, 43, 51, and 57, are revised, as requested in LCRA's exceptions; 3) Findings of Fact Nos. 44 and 46 are added as new Findings of Fact, as requested in CTWC's exceptions; and 4) original Finding of Fact No. 2a was relocated as Ordering Provision No. 6a, now renumbered as Ordering Provision No. 7.
3. During the Agenda meeting, the Commission discussed that given the current conditions, the current lake levels, the forecasted weather, and the limited time between the agenda meeting and the March 1, 2014 trigger date that there is no need to establish a specific combined storage level as a trigger for this emergency order. The Commission also indicated that they must take only the action necessary to address the imminent threat to public health and safety. Therefore, the Commission decided to remove references to trigger levels from the ALJs' proposed order. Accordingly, the Commission struck Findings of Fact Nos. 30a, 30b, 30c, 30f, 30g, 31c, 45a, 49, 49a, and 49b, and struck the last sentence of Finding of Fact No. 38.
4. The Commission made several revisions to provide increased clarity to the ALJs' proposed order and to remove redundant provisions. Therefore, the Commission in its motion, struck Findings of Fact Nos. 41a, 42f, 42g and Ordering Provision No. 8; and revised Findings of Fact Nos. 7, 17, and 22. Additionally, Ordering Provision No. 3 was revised to reflect that the emergency order is final and effective on the date of issuance, pursuant to Texas Government Code § 2001.144(a)(3). Finally, the Commission revised Finding of Fact No. 78 to include the specific date on which notice was provided to the Governor of Texas.

5. In response to the exception filed by CWIC, the Commission struck the last part of the last sentence of Finding of Fact No. 17. Specifically, the Commission struck the words, "...in contravention of the 1988 Order and Certificates of Adjudication Nos. 14-5478 and 14-5482" as unnecessary to its decision to address the imminent threat to public health and safety in this matter.
6. The Commission stated in their deliberation that an automatic renewal is not appropriate in this emergency order given the variability of the specific facts and circumstances relating to the imminent threat to public health and safety in this matter. For this reason, the Commission added Finding of Fact No. 47, which reads, "Combined storage levels are a strong indicator of an imminent threat to the public health and safety. However, given the rapid rise and fall of combined storage levels throughout the historical record, combined storage levels, in and of themselves, are insufficient to determine whether an imminent threat to the public health and safety exists." In addition, the Commission added new Conclusion of Law No. 8, which reads, "The Commission in issuing an order under Texas Water Code § 11.139 must ensure that the relief granted is adequate and tailored to address the imminent threat to public health and safety."
7. Based on the Commission determination that all requirements of Texas Water Code § 11.139 have been met, and the Commissions' determination to remove references in the ALJs' proposed order to trigger levels, the Commission revised Ordering Provision No. 1 to read, "LCRA's 2010 WMP is amended to alleviate LCRA from any obligation to provide interruptible stored water to customers within LCRA's Gulf Coast and Lakeside Divisions and Pierce Ranch for the duration of this emergency order."


NOW, THEREFORE, BE IT ORDERED BY THE COMMISSION OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. LCRA's 2010 WMP is amended to alleviate LCRA from any obligation to provide interruptible stored water to customers within LCRA's Gulf Coast and Lakeside Divisions and Pierce Ranch for the duration of this emergency order.
2. LCRA may provide interruptible stored water to the Garwood Irrigation Division and Pierce Ranch, to the extent required by their contracts.
3. Pursuant to Texas Government Code § 2001.144(a)(3), this emergency order is final and effective on the date of issuance.
4. This emergency order terminates on May 26, 2014. However, this emergency order may be renewed once for no more than 60 days.
5. This emergency order only addresses the specific relief requested from LCRA and is not meant as precedent for amendments to LCRA's WMP or future emergency relief.
6. If any provision, sentence, clause, or phrase of this emergency order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this emergency order.

7. This emergency order does not alter LCRA's obligations to provide water specifically for instream flow or freshwater inflow purposes pursuant to the 2010 WMP.
8. LCRA shall pay the full cost of transcribing the hearing in this case.
9. All other motions, requests for entry of specific Findings of Fact or Conclusions of Law, and any other requests for general or specific relief not expressly granted herein, are hereby denied for want of merit.
10. The Chief Clerk of the Texas Commission on Environmental Quality shall forward a copy of this Order to the parties.

Issue Date: FEB 27 2014

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY


Bryan W. Shaw, Ph.D., P.E. Chairman

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER granting an emergency authorization to the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to Section 11.139 of the Texas Water Code; TCEQ Docket No. 2013-0225-WR.

On July 26, 2013, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the Lower Colorado River Authority's (LCRA) request under Texas Water Code §§ 5.501, 11.138, and 11.139 and the Governor's Emergency Disaster Proclamation related to drought for an emergency order to amend its 2010 Water Management Plan, Permit No. 5838.

Over the last year, the TCEQ has responded to similar requests from LCRA for such emergency authorization. Specifically, the Executive Director (ED) issued an emergency order on January 29, 2013, and the Commission affirmed and modified the emergency order on February 19, 2013. LCRA filed a request to extend the order, and the ED extended the emergency order on May 17, 2013, effective May 29, 2013. On June 10, 2013, the Commission issued an order affirming and modifying the ED's extension of the order, changing the extension termination date to July 29, 2013.

On July 2, 2013, LCRA filed the application for a new emergency order to suspend any obligation LCRA might have under the 2010 Water Management Plan to release interruptible stored water through the remainder of 2013 irrigation season consistent with the prior emergency orders issued in 2013. LCRA's application is attached to this order as Exhibit A and incorporated herein by reference. LCRA subsequently made a clarification to the application on July 10, 2013, via email and that email is attached to this order as Exhibit B and incorporated herein by reference.

The Commission has jurisdiction to consider this matter and makes the following Findings of Fact and Conclusions of Law.

FINDINGS OF FACT

LCRA's Water Rights and 2010 Water Management Plan:

1. On July 2, 2013, LCRA requested emergency relief from the TCEQ related to its Water Management Plan due to persistent drought conditions in the Highland Lakes.
2. LCRA has the right to divert and use up to 1.5 million acre feet (MAF) from Lakes Buchanan and Travis under Certificates of Adjudication Nos. 14-5478 and 14-5482. By court order, LCRA has developed a Water Management Plan (WMP), Permit No. 5838, currently dated 2010, which is part of these certificates.

3. The Certificates of Adjudication and the 2010 WMP govern LCRA's operation of Lakes Buchanan and Travis and dictate how LCRA makes water available from these lakes in order to meet "firm" water customer needs, downstream interruptible irrigation demands, and environmental flow needs of the lower Colorado River and Matagorda Bay.
4. Certificates of Adjudication 14-5478 and 14-5482 state that "LCRA shall interrupt or curtail the supply of water . . . pursuant to commitments that are specifically subject to interruption or curtailment, to the extent necessary to allow LCRA to satisfy all demand for water under such certificate pursuant to all firm, uninterruptible water commitments." The WMP further describes how LCRA will manage and curtail supplies from the lakes during times of drought including through a repeat of the Drought of Record.
5. As established in the 2010 WMP, the combined firm yield of Lakes Buchanan and Travis is 535,812 acre-feet per year (AFY). Of this amount, 90,546 AFY is committed to O.H. Ivie Reservoir, making 445,266 AFY of firm water supply available from Lakes Buchanan and Travis for LCRA to help meet the firm water needs of its customers.
6. As established in the 2010 WMP, until firm demand for water equals the combined firm yield, LCRA can supply water for irrigated agriculture on an interruptible basis. The maximum historical annual amount of reported firm water use from the firm supplies of Lakes Buchanan and Travis during 2000 through 2010 was 247,000 acre-feet in 2011. The maximum interruptible amount of water released from Lakes Buchanan and Travis during this same period occurred in 2011 and totaled about 433,000 acre-feet. The maximum total amount released or used from the Highland Lakes, about 714,000 acre-feet, occurred in 2011.
7. To manage the supply, the 2010 WMP imposes several trigger points keyed to the total combined storage capacity of Lakes Buchanan and Travis that are intended to ensure the firm water supply is protected during droughts. The most relevant trigger points are set out in the following table:

Combined Storage of Lakes Buchanan and Travis	Date on Which Trigger is Decided	Action Taken
1.4 MAF	At any time	Request firm customers to implement voluntary drought response measures.
1.4 MAF	On Jan. 1	Environmental releases for instream flows reduced to meet critical needs for ecosystems for following year. Begin gradual curtailment of interruptible supply to four major irrigation operations.
900,000 acre-feet	At any time	Request firm customers to implement mandatory water restrictions; develop firm customer curtailment plan.
600,000 acre-feet	At any time	If criteria indicates a drought worse than the Drought of Record, then cease interruptible supply and begin curtailment of firm supply.

8. LCRA's 2010 Water Management Plan defines "Drought of Record" as "the drought that occurred during the critical drought period." "The Critical Drought Period" is defined as "the period of time during which the reservoir was last full and refilled, and the storage content was at its lowest minimum value."
9. The LCRA Board may declare a Drought Worse than the Drought of Record if it finds that the following three conditions are simultaneously met:
 - a. Duration of drought is more than 24 months, which is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full;
 - b. Inflows to the lakes are less than inflows during the drought of record; and
 - c. Lakes Buchanan and Travis combined storage has less than 600,000 acre-feet of water.
10. Under the 2010 WMP, once a drought has lasted more than 36 months and a Drought Worse than Drought of Record has been declared by the LCRA Board, the interruptible stored water would be fully and immediately curtailed – making no stored water available for agricultural irrigation or other interruptible uses until lake levels recover or the inflows into the lakes increase substantially. Moreover, LCRA will implement pro rata curtailment of its firm water users once a Drought Worse than Drought of Record is declared and after interruptible stored water (agriculture) uses have been curtailed.
11. Prior to a declaration of a Drought Worse than Drought of Record, LCRA is obligated by the 2010 WMP to provide at least some interruptible water to its four major irrigation operations. The allocation of interruptible water is determined by the LCRA Board of Directors in November, based on projections of the amount expected to be in the combined storage of Lakes Buchanan and Travis on January 1 of the following year. Using January 1 storage, the amounts available under the 2010 WMP follow a sliding scale. Thus, the decision regarding curtailment of interruptible supplies to the four major irrigation operations is keyed to the January 1 storage levels.

Current Conditions

12. Extraordinary drought conditions continue in the area, with record high temperatures, record low inflows to the Highland Lakes, dry conditions upstream of the Highland Lakes, and low rainfall.
13. Inflows into the Highland Lakes in 2013 continue at record low levels. Annual inflows into Lakes Buchanan and Travis in four of the last five years are among the ten lowest years of inflow on record. Inflow in 2013, if continuing at the existing rates, will be among the lowest on record. June 2013 inflows were only 3.5 percent of the historic average for June and were the lowest monthly inflows of the year.
14. The inflows in to Lakes Buchanan and Travis for the past 36 and 60 months are the lowest over a similar time period in the historic record. The past 60 months of inflows are only 52 percent of the lowest inflows in any 60 month period in the historic Drought of Record which occurred from 1947 - 1957. To illustrate further, the lowest 60 month consecutive inflows into the Highland Lakes in acre-feet are as follows:

60-month period ending:	60-month inflow amount:
June 2013	2,150,784
September 1984	3,862,234
October 1967	4,029,989
August 1952	4,128,806

15. Extraordinary drought conditions have existed in much of Texas, including the Colorado River Basin for nearly three years. Although there has been close to normal rainfall in some places in the last 18 months, these events have failed to produce significant inflows into Lakes Buchanan and Travis.
16. High temperatures have also been unprecedented in the summers of 2011 and 2012. The summer of 2011 was the hottest ever recorded in Texas, including Austin.
17. The recent weather forecasts do not indicate significant rainfall in the near future. For the fall of 2013, a pattern of near to below normal rainfall is expected.
18. The hydroclimatic conditions outlined above have created a circumstance where Lakes Buchanan and Travis have been unable to recover in any significant manner, even with an emergency cutoff of nearly all water supply for downstream irrigation in 2012 and the first half of 2013. The lakes are approximately 37% full at this time.
19. The first and second criteria for a Drought Worse than the Drought of Record have been met; more specifically, the drought has lasted for more than 24 months, and the cumulative inflow deficit criteria have been met.
20. If extraordinary drought conditions continue, the criteria for declaration of a Drought Worse than the Drought of Record may be met as early as September, 2013, and there is a one in four chance of these criteria being met by December 31, 2013. Additional releases of interruptible water would add to the risk that a Drought Worse than Drought of Record will be declared in the next few months.
21. The Governor of Texas issued an Emergency Disaster Proclamation on July 5, 2011, certifying that exceptional drought conditions posed a threat of imminent disaster in specified counties in Texas. This proclamation has been renewed monthly, most recently on June 14, 2013, and includes every county bordering or that contributes inflow to the Highland Lakes. These areas are in severe drought or worse. The Emergency Disaster Proclamation also states that as "...provided in Section 418.016 of the code, all rules and regulations that may inhibit or prevent prompt response to this threat are suspended for the duration of the state of disaster."

Imminent Threat To Public Health And Safety

22. LCRA provides raw water out of the combined firm yield of Lakes Buchanan and Travis to 64 retail and wholesale potable water suppliers that together serve over one million people. In addition, LCRA provides water to several electric utilities from the firm water supply of lakes Buchanan and Travis. These electric utilities provide electricity into the electrical grid in Texas operated by the Electric Reliability Council of Texas (ERCOT) and provide electricity to customers in Texas. LCRA also provides firm raw water to several industries located downstream.

23. The current drought conditions are outside the range of hydrologic conditions that were considered during formulation of the 2010 WMP.
24. If LCRA had released interruptible water to agriculture users, it could have resulted in the combined storage dropping to 600,000 acre feet by July 2013, and LCRA having to declare a Drought Worse than the Drought of Record.
25. The 2010 WMP requires that firm customers (mainly cities and industries) be curtailed on a pro rata basis and that LCRA cease all releases for interruptible stored water (regardless of the impact on the crops) when a Drought Worse than the Drought of Record is declared.
26. If LCRA is required to follow the 2010 Water Management Plan and the drought continues, LCRA and its firm customers may need to acquire or develop large quantities of alternative water supplies to meet essential needs of their respective potable water systems. Many of LCRA's firm customers do not have any readily available alternative sources of water supply that could substitute for their reliance on the Colorado River, and these projects could take years to develop. Following the 2010 Water Management Plan under current drought conditions could pose an imminent threat to firm customers served by LCRA from Lakes Buchanan and Travis.
27. Currently, LCRA owns five systems that take raw water from Lakes Buchanan and Travis. LCRA also has twelve customers that actively take raw water for municipal purposes from Lake Travis that are not a part of LCRA's utility facilities. The lowest pumping elevations of the intakes range from 555 feet mean sea level (msl) to 660 feet msl on Lake Travis.
28. As lake levels drop, retail water suppliers are unable to pump water from the lakes. This causes firm customers to either spend funds to reach the water, or obtain alternate sources. Smaller systems will likely have to haul water from a water utility with a viable source. If the lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, the situation presents an imminent threat to public health and safety for the LCRA water systems and for its customers' water systems.
29. Allowing any additional release of interruptible stored water would amplify the risk of LCRA declaring a Drought Worse than the Drought of Record and shorten the timeframe that LCRA and its firm customers have to prepare for such an occurrence. Without emergency authorization to suspend any obligations to release interruptible stored water under the 2010 WMP, farmers who have started crops on groundwater or run-of-the-river water may seek to compel LCRA to make interruptible stored water available.

Drought Contingency Plan

30. LCRA's Drought Contingency Plan (DCP) is contained in Chapter 4 of the 2010 WMP. LCRA was originally required to develop a DCP as a direct result of the court order adjudicating LCRA's water rights and the Texas Water Commission 1989 WMP Order.
31. When LCRA was required under the TCEQ's Chapter 288 rules to develop and implement a DCP, LCRA incorporated all of the same triggers and criteria from the approved WMP into its DCP and elaborated on the details of how pro rata curtailment of interruptible customers might occur to comply with the additional requirement of the TCEQ's Chapter 288 rules.

32. LCRA's current WMP incorporates the Chapter 288-required DCP in Chapter 4 of its WMP. Chapter 4 also complies with TCEQ's DCP rules.
33. In June 2010, LCRA adopted additional changes to LCRA's raw water contract rules that include the procedures for implementing a pro rata curtailment of firm water customers. The 2010 WMP includes a requirement that LCRA develop a stored water curtailment plan to be approved by the LCRA Board and TCEQ in response to combined storage dropping below 900,000 acre feet. TCEQ approved LCRA's water curtailment plan for its firm customers in December 2011.
34. In August, 2011, LCRA called on its firm water customers to voluntarily implement mandatory water use restrictions under their DCPs to reduce water use by 10 to 20 percent.
35. LCRA has fully implemented its DCP. It requires all of its customers that currently divert and purchase water from LCRA to have a DCP. Most of these firm customers have stayed in some form of mandatory water restrictions, significantly limiting landscape irrigation. LCRA's industrial customers have worked to reduce non-essential water uses. Also, LCRA has had several meetings with firm customers in preparation for pro rata curtailment and additional meetings are scheduled for July and August.

Feasible Alternatives

36. LCRA has evaluated many alternatives to address the emergency conditions that the drought presents. Alternatives explored include: Utilizing water from LCRA's other lakes, aggressive conservation, securing the Garwood right for purposes other than agriculture, interbasin transfers, and trucking in water from other sources.
37. None of the alternatives LCRA has identified would avert the projected water supply shortage because most of the supplies identified would produce insufficient or uncertain quantities of supply, would create other operational issues for customers, involve a lengthy permitting process (if not implemented on an emergency basis), or would take years to develop. None of the alternatives identified are feasible or practicable alternatives to the emergency authorization.
38. LCRA has, to this point, fully implemented its Drought Contingency Plan. All of LCRA's customers that currently divert and purchase water from LCRA must have a drought contingency plan. All of those customers have plans on file. LCRA has also implemented several conservation projects over the years.
39. Amending downstream run of the river rights to allow diversion for new uses and at new locations would provide some supply, but the use of these rights alone is not – by itself – a feasible and practicable alternative to the emergency relief related to the 2010 WMP. All of the rights would require amendments to add diversion points, additional places of use, and possible storage. Also, the downstream run-of-river water rights are highly variable in terms of availability and quantity, and do not provide by themselves a sufficient quantity of water to eliminate the need for the emergency relief from the 2010 WMP.
40. A twenty percent reduction in water use by firm customers will require some difficult measures. There may be dramatic reductions in outdoor water use. However, none of these measures will occur quickly enough to help lake levels.

41. LCRA is actively pursuing a formal amendment to its 2010 WMP but that process will not be completed in time to address LCRA's requested relief. LCRA filed an application to amend its 2010 Water Management Plan on March 12, 2012. TCEQ prepared a draft permit for LCRA comment on October 12, 2012. Notice of the application was sent to all water right holders in the Colorado River Basin and published in local newspapers in April, 2013. Following the end of the comment period, on June 3, 2013, the TCEQ Executive Director advised LCRA that he would not be forwarding the application to the Commission at this time, and that his staff would be conducting further review on the application.

Relief Requested

42. LCRA requests TCEQ to issue a new emergency order suspending any obligation LCRA might have under the 2010 WMP to release interruptible stored water through the remainder of the 2013 irrigation season consistent with the prior emergency orders issued in 2013.

Notice

43. Notice was provided to the Governor regarding the Commission's consideration of this emergency order. Notice of the Commission's July 26, 2013 agenda setting for this matter was sent to all water right holders of record in the Colorado River Basin at least ten days before the meeting.

CONCLUSIONS OF LAW

1. The Commission may issue an emergency order under Texas Water Code § 11.139 to amend a certificate of adjudication after notice to the Governor if the Commission finds that emergency conditions exist which present an imminent threat to the public health and safety and which override the necessity to comply with established statutory procedures and there are no feasible practicable alternatives to the emergency authorization.
2. The Findings of Fact show that the requirements of Conclusion of Law No. 1 have been met. The Commission has the authority to issue this emergency order.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. LCRA is under no obligation under the 2010 WMP to provide interruptible stored water outside of the Garwood irrigation division for any purpose during the term of this order.
2. This emergency order is final and effective on July 30, 2013.
3. This emergency order terminates in 120 days, or November 27, 2013.
4. This emergency order may be renewed once for no more than 60 days.
5. The Chief Clerk of the Commission shall forward a copy of this emergency order to all parties.

6. If any provision, sentence, clause, or phrase of this emergency order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this emergency order.

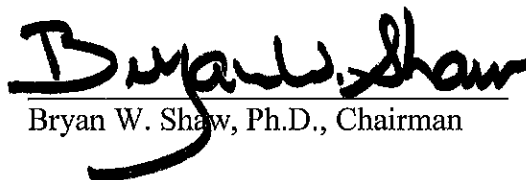
Issue Date:

JUL 26 2013

Effective Date:

July 30, 2013

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY


Bryan W. Shaw, Ph.D., Chairman

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER affirming, with modification, an Emergency Order granted by the Executive Director to the Lower Colorado River Authority; TCEQ Docket No. 2013-0225-WR.

On June 5, 2013, the Texas Commission on Environmental Quality (Commission) considered whether to affirm, modify, or set aside an Emergency Order issued by the Executive Director to the Lower Colorado River Authority (LCRA) to extend the duration of an Emergency Order issued to LCRA to amend its Water Management Plan, Permit No. 5838, for curtailment of interruptible stored water. The Executive Director issued the Emergency Order on May 17, 2013 after providing notice to the Governor on May 13, 2013. Notice of the hearing to affirm, modify, or set aside the Emergency Order was mailed to the water right holders in the Colorado River Basin more than ten days before the hearing. The Commission finds that the Executive Director appropriately issued the Emergency Order and that the requirements for an Emergency Order in Tex. Water Code § 11.139 have been satisfied. However, the Commission finds that the duration of the extension of the Emergency Order as issued by the Executive Director exceeds the limits of Tex. Water Code § 11.139. In order to address the above extension issue, the Commission revises Ordering Provision No. 1.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

The Emergency Order, attached hereto as Exhibit A and incorporated into this Order by reference, is affirmed, but modified as follows:

- a. Ordering Provision No. 1 is revised to read, "The emergency order amending LCRA's Water Management Plan, Permit No. 5838, as modified by the Commission, is extended through July 29, 2013."

Issue date: **JUN 10 2013**

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

A handwritten signature in black ink that reads "Bryan W. Shaw".
Bryan W. Shaw, Ph.D., Chairman

EXHIBIT A

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER extending an emergency authorization to the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to section 11.139 of the Texas Water Code

On May 17, 2013, the Executive Director of the Texas Commission on Environmental Quality (Commission) considered a request from the Lower Colorado River Authority (LCRA) for an extension of an emergency order issued to LCRA under TEX. WATER CODE §§ 5.501, 11.138, and 11.139 to amend its Water Management Plan, Permit No. 5838.

On January 29, 2013, the Executive Director issued an emergency order to LCRA under TEX. WATER CODE § 11.139 to amend its Water Management Plan, Permit No. 5838. That emergency order is attached hereto and incorporated herein by reference as Exhibit A. At its February 13, 2013 agenda meeting, the Commission modified and otherwise affirmed the emergency order. That Commission order is attached hereto and incorporated herein by reference as Exhibit B.

The Commission's order, issued on February 19, 2013, modified the Executive Director's emergency order to provide that the emergency order would continue until one of the following occurs:

The issuance of any TCEQ order approving the LCRA's March 12, 2012 application for amendments to LCRA's 2010 Water Management Plan; or

The expiration of the initial 120 day period allowed by Texas Water Code § 11.139, and any extension that may be granted pursuant to Texas Water Code § 11.139.

LCRA filed a request for an extension of the emergency order on May 6, 2013. LCRA's extension request is attached hereto and incorporated herein by reference as Exhibit C. The expiration of the initial 120 day period allowed by Texas Water Code § 11.139 is May 29, 2013. LCRA requests an extension of the emergency order until October 15, 2013, as well as waiver of the procedural requirements associated with the request to expedite processing the request under the Governor's Emergency Disaster Proclamation last renewed on April 18, 2013.

The Executive Director has jurisdiction to consider this matter and makes the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT

1. Severe drought conditions continue in the area, including record-low inflows to the Highland Lakes, dry conditions upstream of the Highland Lakes, and low rainfall.

2. Inflows into the lakes in 2013 continue at record low levels. For the first four months of 2013, inflow levels were only 13 percent of the historical average inflows for that period. Monthly inflows have been below average in 35 of the past 36 months.
3. The combined storage of Lakes Buchanan and Travis as of May 1, 2013 was approximately 795,000 acre feet, or 40 percent full. As of that date, the current inflow deficit is 34 percent worse than the Drought of Record deficit reference.
4. LCRA's 2010 Water Management Plan defines "Drought of Record" as "the drought that occurred during the critical drought period." "The Critical Drought Period" is defined as "the period of time during which the reservoir was last full and refilled, and the storage content was at its lowest minimum value."
5. The LCRA Board may declare a Drought Worse than the Drought of Record if it finds that the following three conditions are simultaneously met:
 - a. Duration of drought is more than 24 months, which is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full;
 - b. Inflows to the lakes are less than inflows during the Drought of Record; and
 - c. Lakes Buchanan and Travis combined storage has less than 600,000 acre feet of water.
6. The first and second criteria for a Drought Worse than the Drought of Record have been met. The drought has lasted for more than 24 months. The cumulative inflow deficit criteria was met by December 2012.
7. If severe drought conditions continue, the criteria for declaration of a Drought Worse than the Drought of Record may be met as early as August, 2013.
8. The 2010 Water Management Plan requires that firm customers be curtailed on a pro rata basis and that LCRA cease all releases for interruptible stored water when a Drought Worse than the Drought of Record is declared.
9. If LCRA is required to follow the 2010 Water Management Plan and the drought continues, LCRA and its customers may need to acquire or develop large quantities of alternative water supplies to meet essential needs of their respective potable water systems. Many of LCRA's firm customers do not have any readily available alternative sources of water supply that could substitute for their reliance on the Colorado River. Following the 2010 Water Management Plan under current drought conditions could pose an imminent threat to firm customers served by LCRA from Lakes Buchanan and Travis.
10. The hydroclimatic conditions outlined in Finding of Facts Nos. 1-3 have created a circumstance where Lakes Buchanan and Travis have been unable to recover in any significant manner, even with an emergency cutoff of nearly all water supply for downstream irrigation in 2012, and may be unlikely to recover in the near term.
11. The latest National Weather Service's Climate Prediction Center Seasonal Drought Outlook calls for drought to persist through at least July in Central and South Texas, with some possible improvement if there are significant widespread spring rains.

12. If the emergency order expires on May 29, 2013, there may be uncertainty as to what obligations LCRA may have to still provide interruptible stored water. There may be requests for water to plant crops in June, and crops that have been planted with groundwater may switch to surface water. This could impact the supply of water for the firm customers.
13. LCRA's requests an extension of the emergency order through October 15, 2013, to eliminate any possible argument that LCRA must provide interruptible stored water in accordance with the 2010 Water Management Plan.
14. LCRA has evaluated many alternatives to address the emergency conditions that the drought presents. Alternatives explored include: Utilizing water from LCRA's other lakes, aggressive conservation, securing the Garwood right for purposes other than agriculture, interbasin transfers, and trucking in water from other sources.
15. None of the alternatives LCRA has identified would avert the projected water supply shortage because most of the supplies identified would produce insufficient or uncertain quantities of supply, would create other operational issues for customers, involve a lengthy permitting process (if not implemented on an emergency basis), or would take years to develop. None of the alternatives identified are feasible or practicable alternatives to the emergency authorization.
16. If lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, the current drought presents an imminent threat to LCRA's water systems and its customers' water systems.
17. The Governor of Texas issued an Emergency Disaster Proclamation on July 5, 2011, certifying that exceptional drought conditions posed a threat of imminent disaster in specified counties in Texas. This proclamation has been renewed monthly, most recently on April 18, 2013, and includes every county bordering or that contributes inflow to the Highland Lakes. The Emergency Disaster Proclamation also states that as "... provided in Section 418.016 of the code, all rules and regulations that may inhibit or prevent prompt response to this threat are suspended for the duration of the state of disaster."

CONCLUSIONS OF LAW

1. The Commission may issue an emergency order under Texas Water Code § 11.139 to amend a certificate of adjudication after notice to the Governor if the Commission finds that emergency conditions exist which present an imminent threat to the public health and safety and which override the necessity to comply with established statutory procedures and there are no feasible practicable alternatives to the emergency authorization.
2. The Executive Director may issue an emergency order pursuant to Texas Water Code § 11.139(f) after notice to the Governor if an imminent threat to the public health and safety exists which requires emergency action before the Commission can take action and there are no feasible alternatives. A hearing to affirm, modify, or set aside the emergency order must be held by the Commission as soon as practicable, but not later than 20 days after the emergency order is granted.

3. A Commission hearing to affirm, modify, or set aside this emergency order will be held on June 5, 2013.
4. The Findings of Fact show that the requirements of Conclusions of Law 1 - 3 have been met. The Executive Director has the authority to issue this renewal of the emergency order.

NOW, THEREFORE, BE IT ORDERED BY THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. The emergency order amending LCRA's Water Management Plan, Permit No. 5838, as modified by the Commission, is extended through October 15, 2013.
2. This emergency order was issued without a hearing. A hearing to affirm, modify, or set aside this emergency order will be held before the Commission on June 5, 2013.
4. This emergency order is final and effective on May 29, 2013.
5. The Chief Clerk of the Commission shall forward a copy of this emergency order to all parties.
6. If any provision, sentence, clause, or phrase of this emergency order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this emergency order.

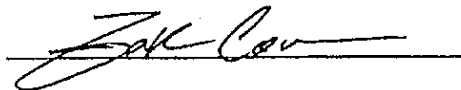
Issue Date:

May 17, 2013

Effective Date:

May 29, 2013

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

A handwritten signature in black ink, appearing to read "Zak Covar", is written over a horizontal line.

Zak Covar
Executive Director

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER affirming, with modification, an Emergency Order granted by the Executive Director to the Lower Colorado River Authority; Docket No. 2013-0225-WR.

On February 13, 2013, the Texas Commission on Environmental Quality ("TCEQ" or "Commission") considered whether to affirm, modify, or set aside an Emergency Order issued by the Executive Director to the Lower Colorado River Authority ("LCRA") to amend its 2010 Water Management Plan for curtailment of interruptible stored water. The Executive Director issued the Emergency Order on January 29, 2013 after providing notice to the Governor on January 24, 2013. Notice of this hearing to affirm, modify, or set aside the Emergency Order was mailed to all water right holders in the Colorado River Basin more than ten days before the hearing. The Commission finds that the Executive Director appropriately issued the Emergency Order and that the requirements for an Emergency Order in Tex. Water Code § 11.139 have been satisfied. However, the Commission finds that the duration of the Emergency Order as issued by the Executive Director exceeds the limits of Tex. Water Code § 11.139. In order to address the above duration issue as well as provide greater clarity to the Emergency Order, the Commission revises Finding of Facts Nos. 33 and 35 and Ordering Provisions Nos. 3 and 4.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

The Emergency Order, attached hereto as Exhibit A and incorporated into this Order by reference, is affirmed, but modified as follows:

- a. Finding of Fact No. 33 is revised to read, "If the lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, the current drought presents an imminent threat to the LCRA water systems and its customers' water systems.";
- b. The second sentence of Finding of Fact No. 35 is revised to read, "Thus, the emergency authorization is the only means by which LCRA can be provided with the flexibility necessary under the present conditions to determine if it can commit to supplying interruptible stored water to its irrigation operations.";

c. Ordering Provision No. 3 is revised to read:

“This Order shall continue until one of the following occurs:

- a) The issuance of any TCEQ order approving LCRA’s March 12, 2012 application for amendments to the 2010 WMP; or
- b) The expiration of the initial 120 day period allowed by Texas Water Code § 11.139, and any extension that may be granted pursuant to Texas Water Code § 11.139.”;

d. Ordering Provision No. 4 is deleted; and

e. The remaining Ordering Provisions are renumbered accordingly.

Issue date: **FEB 19 2013**

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY



Bryan W. Shaw, Ph.D., Chairman

EXHIBIT A

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN EMERGENCY ORDER granting an emergency authorization to the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to section 11.139 of the Texas Water Code

On January 29, 2013, the Executive Director of the Texas Commission on Environmental Quality (Commission) considered a request from the Lower Colorado River Authority (LCRA) for an Emergency Order, under Texas Water Code §§ 5.501, 11.138, 11.139, and the Governor's Emergency Disaster Proclamation related to drought, to amend its Water Management Plan, Permit No. 5838.

The Executive Director has jurisdiction to consider this matter and makes the following Findings of Fact and Conclusions of Law:

FINDINGS OF FACT

LCRA's Water Rights and 2010 Water Management Plan

1. On November 24, 2012, LCRA requested emergency relief from the TCEQ related to its Water Management Plan due to persistent drought conditions in the Highland Lakes. LCRA, based on worsening drought conditions and with unanimous board support, filed an Amended and Supplemental application for emergency relief with the TCEQ on January 11, 2013.
2. LCRA has the right to divert and use up to 1.5 million acre feet (MAF) from Lakes Buchanan and Travis under Certificates of Adjudication Nos. 14-5478 and 14-5482. By court order, LCRA has developed a Water Management Plan (WMP), Permit No. 5838, currently dated 2010, which is part of these certificates.
3. The Certificates of Adjudication and the 2010 WMP govern LCRA's operation of Lakes Buchanan and Travis and dictate how LCRA makes water available from these lakes to help meet "firm" water customer needs, downstream interruptible irrigation demands, and environmental flow needs of the lower Colorado River and Matagorda Bay.
4. Certificates of Adjudication 14-5478 and 14-5482 state that "LCRA shall interrupt or curtail the supply of water . . . pursuant to commitments that are specifically subject to interruption or curtailment, to the extent necessary to allow LCRA to satisfy all demand for water under such

certificate pursuant to all firm, uninterruptible water commitments.” The WMP further describes how LCRA will manage and curtail supplies from the lakes during times of drought including through a repeat of the Drought of Record.

5. As established in the 2010 WMP, the combined firm yield of Lakes Buchanan and Travis is 535,812 acre-feet per year (AFY). Of this amount, 90,546 AFY is committed to O.H. Ivie Reservoir, making 445,266 AFY of firm water supply available from Lakes Buchanan and Travis for LCRA to help meet the firm water needs of its customers.
6. So long as firm demand for water is equal or less than the combined firm yield, LCRA can supply water for irrigated agriculture on an interruptible basis. The maximum historical annual amount of reported firm water use from the firm supplies of Lakes Buchanan and Travis during 2000 through 2011 was 247,000 acre-feet in 2011. The maximum interruptible water released from Lakes Buchanan and Travis during this same period occurred in 2011 and totaled about 433,000 acre-feet. The maximum total amount released or used from the Highland Lakes, about 714,000 acre-feet, occurred in 2011.
7. LCRA’s 2010 WMP defines “Drought of Record” as “the drought that occurred during the critical drought period.” “The Critical Drought Period” is defined as “the period of time during which the reservoir was last full and refilled, and the storage content was at its lowest minimum value.”
8. To manage the supply, the 2010 WMP imposes several trigger points keyed to the total combined storage capacity of Lakes Buchanan and Travis that are intended to ensure the firm water supply is protected during droughts. The most relevant trigger points are set out in the following table.

Combined Storage of Lakes Buchanan and Travis	Date on Which Trigger is Decided	Action Taken
1.4 MAF	At any time	Request firm customers to implement voluntary drought response measures.
1.4 MAF	On Jan. 1	Environmental releases for instream flows reduced to meet critical needs for ecosystems for following year. Begin gradual curtailment of interruptible supply to four major irrigation operations.
900,000 acre-feet	At any time	Request firm customers to implement mandatory water restrictions; develop firm customer curtailment plan.
600,000 acre-feet	At any time	If criteria indicate a drought worse than the Drought of Record, then cease interruptible supply and begin curtailment of firm supply.

9. The LCRA Board may declare a Drought Worse than the Drought of Record (DWDR) if it finds that the following three conditions are simultaneously met:
 - a. Duration of drought is more than 24 months, which is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full;
 - b. Inflows to the lakes are less than inflows during the Drought of Record; and
 - c. Lakes Buchanan and Travis combined storage has less than 600,000 acre feet of water.
10. Under the 2010 WMP, once a drought has lasted more than 36 months and a Drought Worse than the Drought of Record (DWDR) has been declared by the LCRA Board, the interruptible stored water would be fully and immediately curtailed – making no stored water available for agricultural irrigation or other interruptible uses until lake levels recover or the inflows into the lakes increase substantially. Moreover, LCRA will implement pro rata curtailment of its firm water users once a DWDR is declared and after interruptible stored water (agriculture) uses have been curtailed.
11. Prior to a declaration of a DWDR, LCRA is obligated by the 2010 WMP to provide at least some interruptible water to its four major irrigation operations.

Current Conditions

12. Inflows to the Highland Lakes are at record lows. Four of the five lowest amounts of annual inflows into Lakes Buchanan and Travis on record have occurred since 2006, including in 2012.
13. The two month inflow total for November and December, 2012, represents the second lowest flow on record.
14. Rainfall events have occurred during the preceding twelve month period; however, these rainfall events failed to produce significant inflows into Lakes Buchanan and Travis.
15. The U.S. Drought monitor shows that most of the Texas Hill Country and Central Texas are now within the “severe drought” designation.
16. The period of October through December 2012 was the driest combined October through December period since 1950, with just 2.16 inches of rain statewide.
17. Weather forecasts indicate that an El Nino will not bring any relief. The National Weather Service's Seasonal Drought Outlook calls for the drought to persist across most of Texas or intensify through the winter and into early spring. Longer-term indicators suggest a pattern of near to below normal rainfall through next summer. If dry conditions continue, precipitation patterns will be similar to those experienced in the 1950s.

18. The hydroclimatic conditions outlined in Finding of Facts Nos. 12-17 have created a circumstance where Lakes Buchanan and Travis have been unable to recover in any significant manner, even with an emergency cutoff of nearly all water supply for downstream irrigation in 2012, and may be unlikely to recover in the near term.
19. On January 1, 2013, the combined storage in Lakes Travis and Buchanan had dropped by about 45,000 acre feet since November 1, 2012, and the combined storage was about 825,000 acre feet or 41% full.
20. The Governor of Texas issued an Emergency Disaster Proclamation on July 5, 2011, certifying that exceptional drought conditions posed a threat of imminent disaster in specified counties in Texas. This proclamation has been renewed monthly, most recently on January 25, 2013, and includes every county bordering or that contributes inflow to the Highland Lakes.

Harm from Following 2010 WMP Requirements

21. LCRA provides raw water out of the combined firm yield of Lakes Buchanan and Travis to over 60 retail and wholesale potable water suppliers that together serve over one million people. In addition, LCRA provides water to several electric utilities from the firm water supply of Lakes Buchanan and Travis. These electric utilities provide electricity into the electrical grid in Texas operated by the Electric Reliability Council of Texas (ERCOT) and provide electricity to customers in Texas. LCRA also provides firm raw water to several industries located downstream.
22. The current drought conditions are outside the range of hydrologic conditions that were considered during formulation of the 2010 WMP.
23. Unless a change in the weather occurs that contributes significant water to storage in Lakes Buchanan and Travis, following the 2010 WMP will require LCRA to:
 - a. Make a substantial quantity of stored water available for interruptible use and enter into contracts for interruptible water, based on January 1, 2013 combined storage;
 - b. Begin releases of interruptible stored water to meet demands in the four irrigation operations for the 2013 crop;
 - c. Suffer a significant likelihood of reaching the third (and final) criteria for DWDR conditions;
 - d. Declare a DWDR;
 - e. Cut off stored water for interruptible contracts, thereby ruining the crop already planted; and
 - f. Curtail cities' and industries' water use by 20 percent or more.
24. Under the criteria for declaring a DWDR in Finding of Fact No. 9, the LCRA Board of Directors may declare a DWDR in the middle of the first crop and releases from storage would cease.

Farmers could lose their crops and the investment made to grow the crops. At the same time there would be an irreversible reduction in supply for firm customers.

25. The first and second criteria for a DWDR set out in Finding of Fact No. 9 have been met. The drought has lasted more than 24 months. The cumulative inflow deficit criteria was met by December 2012.
26. Following the 2010 WMP creates a risk that a DWDR will be declared during the growing season unless there is a substantial increase in storage before planting begins.
27. The 2010 WMP requires that firm customers be curtailed on a pro rata basis and that LCRA cease all releases for interruptible stored water when a DWDR is declared.
28. At a January 1 combined storage level of 825,000 acre feet, the 2010 WMP requires LCRA to make available around 185,000 acre-feet for diversion for interruptible irrigation use in the lower basin for the 2013 crop year.
29. Not including the amount of water needed for firm water users, evaporation, and releases for instream uses, the combined storage of the reservoirs could drop to 600,000 acre-feet well before irrigators could finish their crop in mid to late August unless there is significant rainfall in the watershed above Lakes Buchanan and Travis.
30. Based on LCRA's projections, the combined storage in Lakes Buchanan and Travis must be at or above 850,000 acre-feet and the release can be no more than 121,500 acre feet before the risk of reaching 600,000 acre feet is reduced.
31. If LCRA is required to follow the 2010 WMP and the drought continues, LCRA and its customers may need to acquire or develop large quantities of alternative water supplies to meet essential needs of their respective potable water systems. Many of LCRA's firm customers do not have any readily available alternative sources of water supply that could substitute for their reliance on the Colorado River. Following the 2010 WMP under current drought conditions could pose an imminent threat to firm customers served by LCRA from Lakes Buchanan and Travis.
32. LCRA owns five systems that take raw water from Lakes Buchanan and Travis. LCRA also has twelve customers that actively take raw water for municipal purposes from Lake Travis that are not a part of LCRA's utility facilities. The lowest pumping elevations of the intakes range from 555 feet mean sea level (msl) to 660 feet msl on Lake Travis. If the levels in Lake Travis or Lake Buchanan drop below the current lowest pumping elevations, LCRA and its wholesale raw water customers must take action to either lower their pumping elevation or find alternative supplies. For smaller systems, the alternative is likely hauling water from a water utility with a viable source. For larger systems, temporary measures must be implemented to extend the intake capabilities to reach lower elevation water. Similar measures would likely be needed by LCRA's raw water customers that have their own intake facilities.

33. If the lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, the current drought presents an imminent threat to public health and safety for the LCRA water systems and for its customers' water systems.
34. Because the WMP is required by, and incorporated into, LCRA's Certificates of Adjudication 14-5478 and 14-5482, the WMP may only be amended in the same manner and following the same procedures as one would amend any state-issued water right, which procedures for this type of amendment would require basin-wide 30-day public notice and significant staff review.
35. The time period in which LCRA must make decisions regarding its commitments of interruptible water occurs long before there could be any decision on any amendments to the 2010 WMP if the regular TCEQ water rights permitting procedures are followed. Thus, the emergency authorization is the only means by which LCRA can be provided with the flexibility to determine if it can commit to supplying interruptible stored water to its irrigation operations.

Drought Contingency Plan

36. LCRA's Drought Contingency Plan (DCP) is contained in Chapter 4 of the 2010 WMP. LCRA was originally required to develop this part of the WMP as a direct result of the court order adjudicating LCRA's water rights and the Texas Water Commission's 1989 WMP Order, giving initial approval to LCRA of an earlier version of the plan.
37. Prior to any state requirement for water conservation plans, LCRA required its municipal customers to adopt such plans.
38. When LCRA was required under the TCEQ's Chapter 288 rules to develop and implement a DCP, LCRA incorporated all of the same triggers and criteria from the approved WMP into its DCP, and elaborated on the details of how pro rata curtailment of interruptible customers might occur to comply with the additional requirements of the TCEQ's Chapter 288 rules. LCRA's current WMP incorporates the Chapter 288-required DCP in Chapter 4. This plan also includes water use reduction targets for firm water supplies to comply with TCEQ's DCP rules adopted in 2004. In April 2007, LCRA adopted changes to LCRA's raw water contract rules related to implementation of LCRA's DCP.
39. In June 2010, LCRA adopted additional changes to LCRA's raw water contract rules that include the procedures for implementing a pro rata curtailment of firm water customers. The 2010 WMP includes a requirement that LCRA develop a stored water curtailment plan to be approved by the LCRA Board and TCEQ in response to combined storage dropping below 900,000 acre-feet. TCEQ approved LCRA's water curtailment plan for its firm customers in December 2011.
40. LCRA has fully implemented its Drought Contingency Plan. All of LCRA's customers that currently divert and purchase water from LCRA must have a drought contingency plan. As of October 2012, 96 percent of those customers have plans on file.

41. In August 2011, the combined storage of Lakes Buchanan and Travis reached 900,000 acre-feet. As required by the WMP, LCRA called on its firm water customers to voluntarily implement mandatory water use restrictions under their individual DCPs to reduce their water use by 10 to 20 percent. As lake conditions continued to decline, most of LCRA's municipal customers have remained in some form of mandatory water restrictions, significantly limiting landscape irrigation.
42. LCRA industrial customers, who consist of power plants and a few large industries along the Gulf Coast, have cut back on non-essential water uses, such as outdoor watering. However these cutbacks likely have resulted in a very minimal savings. Any further cutbacks will result in a decrease in production.
43. If LCRA declares a DWDR and releases of interruptible stored water cease, LCRA's DCP requires firm customers to implement measures to immediately reduce their water consumption by twenty-percent (20 percent). To achieve a 20 percent reduction in use, firm municipal customers would likely have to eliminate all outdoor water use. Further, industrial customers would likely have to curtail their production.

Feasible Alternatives

44. Reductions in water use by firm customers cannot prevent the emergency created by falling reservoir levels that would result from the level of irrigation releases required by the 2010 WMP. Even if firm customer water use reductions are implemented immediately once such a reduction is mandated by LCRA, the results of this reduction will not be fast enough to compensate for the falling reservoir levels.
45. Implementation of the 2010 WMP for purposes of determining the amount of interruptible stored water available for downstream irrigation operations could result in LCRA reaching DWDR conditions during first crop.
46. Amending downstream run of the river rights to allow diversion for new uses and at new locations would provide some supply, but the use of these rights alone is not – by itself – a feasible and practicable alternative to the emergency relief related to the 2010 WMP. All of the rights would require amendments to add diversion points, additional places of use, and possible storage. Also, the downstream run-of-river water rights are highly variable in terms of availability and quantity, and do not provide by themselves a sufficient quantity of water to eliminate the need for the emergency relief from the 2010 WMP as requested herein.
47. LCRA has evaluated many other alternatives to address the emergency conditions that the drought presents. Alternatives explored include: Utilizing water from LCRA's other lakes, aggressive conservation, securing the Garwood right for purposes other than agriculture, interbasin transfers, and trucking in water from other sources.

48. None of the alternatives LCRA has identified would avert the projected water supply shortage because most of the supplies identified would produce insufficient or uncertain quantities of supply, would create other operational issues for customers, involve a lengthy permitting process (if not implemented on an emergency basis), or would take years to develop. None of the alternatives identified are feasible or practicable alternatives to the emergency authorization.

Requested Relief

49. A modified curtailment procedure for interruptible stored water would provide LCRA the ability to supply a reduced amount of interruptible stored water. Supplying a reduced amount of interruptible stored water, up to 121,500 acre feet, when the reservoirs are at or above the 850,000 acre feet storage level on March 1, 2013, greatly reduces the risk of reaching 600,000 acre feet of combined storage and declaring a DWDR during first crop.
50. Specifically, LCRA requests that it be allowed to implement a different process than required by the 2010 WMP for curtailment of interruptible stored water that would:
- a. Provide interruptible stored water for first crop based on the combined storage of Lakes Buchanan and Travis on March 1, 2013 (11:59 p.m.), as follows:
 - 1) Provide no interruptible stored water to customers within Gulf Coast and Lakeside Divisions if the combined storage is below 850,000 acre-feet.
 - 2) Provide up to 121,500 acre-feet of interruptible stored water for diversion for customers within Gulf Coast, Lakeside, Garwood and Pierce Ranch Operations if the combined storage is at or above 850,000 acre-feet and less than 920,000 acre-feet.
 - 3) Provide interruptible stored water in accordance with the then current Water Management Plan if the combined storage is at or above 920,000 acre-feet based on March 1 storage instead of January 1 storage.
 - b. Provide interruptible stored water for second crop based on the combined storage of Lakes Buchanan and Travis, as follows:
 - 1) If the combined storage is at or above 850,000 acre-feet and below 920,000 acre feet on March 1, 2013 (11:59 p.m.), and combined storage is below 950,000 acre feet on July 1, 2013 (11:59 p.m.), provide no interruptible stored water to customers within Gulf Coast and Lakeside Divisions.
 - 2) If the combined storage is at or above 850,000 acre-feet and below 920,000 acre-feet on March 1, 2013 (11:59 p.m.), and the combined storage is at or above 950,000 acre feet on July 1, 2013 (11:59 p.m.), provide up to 50,000 acre feet of interruptible stored water for diversion for customers in Gulf Coast, Lakeside, Garwood and Pierce Ranch Operations.

- 3) If combined storage is at or above 920,000 acre-feet on March 1, 2013 (11:59 p.m.), provide interruptible stored water for the second crop in accordance with the then current Water Management Plan based on March 1 storage instead of January 1 storage.
 - c. Provide interruptible stored water to Garwood and Pierce Ranch, in accordance with their contracts.
51. LCRA requests that TCEQ process this request in a manner that allows LCRA to gain the benefit of the authorization for as long as may be needed to address continued drought conditions. To that end, LCRA requests that:
- a. The emergency authorization become effective no earlier than December 31, 2012; and
 - b. The emergency authorization continue until the *later* of:
 - 1) The initial 120 day period allowed by Texas Water Code § 11.139, and any extension thereof as allowed by Section 11.139; or
 - 2) The issuance of any TCEQ order approving amendments to the 2010 WMP, as may be filed by the LCRA consistent with the January 27, 2010 Order Approving Amendments to the Water Management Plan, if such order is issued prior to December 31, 2013; or
 - 3) December 31, 2013.
52. This order should not extend until the end of the initial 120 day period or extension, or December 31, 2013, whichever occurs last, if the Order Approving Amendments to the Water Management Plan is issued prior to December 31, 2013.
53. Consistent with the Governor's Proclamation, LCRA requests that procedural requirements associated with this request, or any portion thereof, be waived to expedite the processing of this request.

Notice

54. Notice was provided to the Governor on January 24, 2013. Notice for the Commission hearing to affirm, modify, or set aside this emergency order on February 13, 2013, will be provided by mail to all water right holders in the basin at least ten days before the hearing.

CONCLUSIONS OF LAW

1. The Commission may issue an emergency order under Texas Water Code § 11.139 to amend a certificate of adjudication after notice to the Governor if the Commission finds that emergency conditions exist which present an imminent threat to the public health and safety and which

override the necessity to comply with established statutory procedures and there are no feasible practicable alternatives to the emergency authorization.

2. The emergency authorization may be for 120 days, and renewed once for 60 days.
3. The Executive Director may issue an emergency order pursuant to Texas Water Code § 11.139(f) after notice to the Governor if an imminent threat to the public health and safety exists which requires emergency action before the Commission can take action and there are no feasible alternatives. A hearing to affirm, modify, or set aside the emergency order must be held by the Commission as soon as practicable, but not later than 20 days after the emergency order is granted.
4. Notice of the Commission hearing to affirm modify or set aside shall be given as the Commission considers practicable under the circumstances.
5. Consistent with the Governor's Proclamation and under Finding of Fact No. 20, the procedural requirements associated with this request, or any portion thereof, may be waived to expedite the processing of this request.
6. The Findings of Fact show that Conclusions of Law 1 through 3 have been met.
7. The Executive Director has the authority to issue this order. A Commission hearing to affirm, modify, or set aside will be held on February 13, 2013.

NOW, THEREFORE, BE IT ORDERED BY THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. LCRA's WMP, Permit No. 5838, is amended to temporarily establish a different process for curtailment of interruptible stored water that would:
 - a. Provide interruptible stored water for first crop based on the combined storage of Lakes Buchanan and Travis on March 1, 2013 (11:59 p.m.), as follows:
 - 1) Provide no interruptible stored water to customers within Gulf Coast and Lakeside Divisions if the combined storage is below 850,000 acre-feet.
 - 2) Provide up to 121,500 acre-feet of interruptible stored water for diversion for customers within Gulf Coast, Lakeside, Garwood and Pierce Ranch Operations if the combined storage is at or above 850,000 acre-feet and less than 920,000 acre-feet.
 - 3) Provide interruptible stored water in accordance with the then current Water Management Plan if the combined storage is at or above 920,000 acre-feet based on March 1 storage instead of January 1 storage.

- b. Provide interruptible stored water for second crop based on the combined storage of Lakes Buchanan and Travis, as follows:
 - 1) If the combined storage is at or above 850,000 acre-feet and below 920,000 acre feet on March 1, 2013 (11:59 p.m.), and combined storage is below 950,000 acre feet on July 1, 2013 (11:59 p.m.), provide no interruptible stored water to customers within Gulf Coast and Lakeside Divisions.
 - 2) If the combined storage is at or above 850,000 acre-feet and below 920,000 acre-feet on March 1, 2013 (11:59 p.m.), and the combined storage is at or above 950,000 acre feet on July 1, 2013 (11:59 p.m.), provide up to 50,000 acre feet of interruptible stored water for diversion for customers in Gulf Coast, Lakeside, Garwood and Pierce Ranch Operations.
 - 3) If combined storage is at or above 920,000 acre-feet on March 1, 2013 (11:59 p.m.), provide interruptible stored water for the second crop in accordance with the then current Water Management Plan based on March 1 storage instead of January 1 storage.
 - c. Provide interruptible stored water to Garwood and Pierce Ranch, to the extent required by their contracts.
2. The emergency authorization becomes effective upon issuance; and
 3. The emergency authorization shall continue until the issuance of any TCEQ order approving LCRA's March 12, 2012, application for amendments to the 2010 WMP.
 4. If the Order Approving Amendments to the Water Management Plan for LCRA's application dated March 12, 2012, is not issued before December 31, 2013, this order shall continue until the later of:
 - a. The initial 120 day period allowed by Texas Water Code § 11.139, and any extension thereof as allowed by Section 11.139; or
 - b. December 31, 2013.
 5. This order was issued without a hearing. A hearing to affirm, modify, or set aside this order will be held before the Commission on February 13, 2013.
 6. The Chief Clerk of the Commission shall forward a copy of this order to all parties.
 7. If any provision, sentence, clause, or phrase of this order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this order.

Issue Date: 1/29/2013

EXECUTIVE DIRECTOR
TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY



Zak Covar
Executive Director

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN ORDER

affirming an Emergency Order granted by the Executive Director to the Lower Colorado River Authority; Docket No. 2011-2096-WR

On December 7, 2011, the Texas Commission on Environmental Quality ("TCEQ" or "Commission") considered whether to affirm, modify, or set aside an Emergency Order issued by the Executive Director to the Lower Colorado River Authority (LCRA) to amend its 2010 Water Management Plan, Permit No. 5838, to allow LCRA to implement a different process than required by the 2010 Water Management Plan for curtailment of interruptible stored water. The Executive Director issued the Emergency Order on November 17, 2011, after providing notice to the Governor on November 15, 2011. Notice of this December 7, 2011 hearing to affirm, modify or set aside the Emergency Order was mailed to all water right holders in the Colorado River Basin more than ten days before the hearing. The Commission finds that the Executive Director appropriately issued the Emergency Order and that the requirements for an Emergency Order in Tex. Water Code § 11.139 have been satisfied.

THEREFORE, THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY ORDERS THAT:

The November 17, 2011 Emergency Order, attached hereto as Exhibit A and incorporated into this Order by reference, is affirmed.


TEXAS COMMISSION ON ENVIRONMENTAL QUALITY


For the Commission

Issue Date: DEC 12 2011

THE STATE OF TEXAS
COUNTY OF TRAVIS

I hereby certify that this is a true and correct copy of a Texas Commission on Environmental Quality document, which is filed in the permanent records of the Commission. Given under my hand and the seal of office on

 DEC 14 2011

Bridget C. Bohac, Chief Clerk
Texas Commission on Environmental Quality

EXHIBIT A

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



AN EMERGENCY ORDER granting an emergency authorization to the Lower Colorado River Authority to amend its Water Management Plan, Permit No. 5838, pursuant to section 11.139 of the Texas Water Code; TCEQ Docket No. 2011-2096-WR

On November 17, 2011, the executive director of the Texas Commission on Environmental Quality (Commission) considered a request from the Lower Colorado River Authority (LCRA) for an Emergency Order under TEX. WATER CODE § 11.139 and 30 TEX. ADMIN. CODE §§ 295.91 and 295.156 to amend its Water Management Plan, Permit No. 5838. The executive director has jurisdiction to consider this matter and the following Findings of Fact and Conclusions of Law are appropriate:

FINDINGS OF FACT

LCRA's Water Rights and 2010 Water Management Plan

1. LCRA has the right to divert and use up to 1.5 million acre feet (MAF) from Lakes Buchanan and Travis under Certificates of Adjudication Nos. 14-5478 and 14-5482. By court order, LCRA has developed a Water Management Plan (WMP), currently dated 2010, which is part of these certificates and has its own number, Permit No. 5838.
2. The Certificates of Adjudication and the 2010 WMP govern LCRA's operation of Lakes Buchanan and Travis and dictate how LCRA makes water available from these lakes to help meet "firm" water customer needs, downstream interruptible irrigation demands, and environmental flow needs of the lower Colorado River and Matagorda Bay.
3. Certificates of Adjudication 14-5478 and 14-5482 state that "LCRA shall interrupt or curtail the supply of water . . . pursuant to commitments that are specifically subject to interruption or curtailment, to the extent necessary to allow LCRA to satisfy all demand for water under such certificate pursuant to all firm, uninterruptible water commitments." The WMP further describes how LCRA will manage and curtail supplies from the lakes during times of drought including through a repeat of the Drought of Record.
4. As established in the 2010 WMP, the combined firm yield of Lakes Buchanan and Travis is 535,812 acre-feet per year (AFY). Of this amount, 90,546 AFY is committed to O.H. Ivie Reservoir, making 445,266 AFY of firm water supply available from Lakes Buchanan and Travis for LCRA to help meet the firm water needs of its customers.
5. Until firm demand for water equals the combined firm yield, LCRA can supply water for irrigated agriculture on an interruptible basis. The maximum historical annual amount of reported firm water use from the firm supplies of Lakes Buchanan and Travis during 2000 through 2010 was 152,000 acre-feet in 2008. This use was about 30 percent of the

current total commitment of firm water supply. The maximum interruptible water released from Lakes Buchanan and Travis during this same period occurred in 2009 and totaled about 368,000 acre-feet. The maximum total amount released or used from the Highland Lakes, about 552,000 acre-feet, occurred in 2009.

6. To manage the supply of water, the 2010 WMP imposes several trigger points keyed to the total combined storage capacity of Lakes Buchanan and Travis that are intended to ensure the firm water supply is protected during droughts. The most relevant trigger points are set out in the following table:

Combined Storage of Lakes Buchanan and Travis	Date on Which Trigger is Decided	Action Taken
1.4 MAF	At any time	Request firm customers to implement voluntary drought response measures.
1.4 MAF	On Jan. 1	Environmental releases for instream flows reduced to meet critical needs for ecosystems for following year. Begin gradual curtailment of interruptible supply to four major irrigation operations.
900,000 acre-feet	At any time	Request firm customers to implement mandatory water restrictions; develop firm customer curtailment plan.
600,000 acre-feet	At any time	If criteria indicates a drought worse than the Drought of Record, then cease interruptible supply and begin curtailment of firm supply.

7. Under the 2010 WMP, once a drought has lasted more than 36 months and a Drought Worse than the Drought of Record (DWDR) has been declared, the interruptible stored water would be fully and immediately curtailed – making no stored water available for agricultural irrigation or other interruptible uses until lake levels recover or the inflows into the lakes increase substantially. Moreover, LCRA will implement pro rata curtailment of its firm water users once a DWDR is declared and after interruptible stored water (agriculture) uses have been curtailed.
8. Prior to a declaration of a DWDR, LCRA is obligated by the 2010 WMP to provide at least some interruptible water to its four major irrigation operations. The allocation of interruptible water is determined by the LCRA Board of Directors in November, based on projections of the amount expected to be in the combined storage of Lakes Buchanan and Travis on January 1 of the following year. Thus, the decision regarding curtailment of interruptible supplies to the four major irrigation operations is keyed to the January 1 storage levels.

Current Conditions

9. LCRA provides raw water out of the combined firm yield of Lakes Buchanan and Travis to 64 retail and wholesale potable water suppliers that together serve over one million people. In addition, LCRA provides water to several electric utilities from the firm water supply of Lakes Buchanan and Travis. These electric utilities provide electricity into the electrical grid in Texas operated by the Electric Reliability Council of Texas (ERCOT) and provide electricity to customers in Texas. LCRA also provides firm raw water to several industries located downstream.
10. According to the latest U.S. National Drought Monitor, a product of the National Weather Service, the U.S. Department of Agriculture, and the National Drought Mitigation Center, all of Central Texas, the middle Texas coast, and the Texas Hill Country are designated as being in "exceptional drought," the worst of four (4) possible categories of drought.
11. The drought has been unprecedented relative to the long-term climate and hydrologic record: record low inflows, record low precipitation, extreme, record-setting summer heat and enormous wildfires.
12. At times, this drought has been more intense than the region's Drought of Record that occurred between 1947 and 1957.
13. Inflows into Lakes Buchanan and Travis through September of 2011 were at about eight percent (8%) of average inflows.
14. Inflows for the three months of June, July, August and September were less than one percent (1%) of the average inflows for this period. The approximately 2,000 acre-feet of inflows during this period are the lowest of any three-month period in the historical record. The record low inflows are a result of the lack of rain, record high temperatures, and high evaporation rates.
15. On a statewide basis, the current drought is the worst 1-year drought on record dating back to 1895.
16. Rainfall across Texas between October 1, 2010 and August 31, 2011 has totaled only 10.06 inches, just 40 percent of the long-term average rainfall. This has been the driest 12-month period ever recorded in Austin, dating back to 1856.
17. The City of Austin recorded the most 100-degree days and the most consecutive 100-degree days dating back to 1856.
18. High temperatures combined with numerous sunny days have caused much higher than normal evaporation. Evaporation rates were about 13 percent higher than they were in the summer of 2009. In most areas of the Colorado River basin, the soil moisture content in the top few inches of the soil is essentially zero.
19. The National Weather Service's Seasonal Drought Outlook calls for the drought to persist between October and December 2011. Below average rainfall is forecast across the southern U.S., including all of Texas, for the period of January through March 2012.

Based on similar historical developments, it is likely that drier than normal weather conditions could persist through the summer of 2012.

20. The Governor of Texas Issued an Emergency Disaster Proclamation for wildfires and drought which was originally issued on December 21, 2010 and last renewed on November 1, 2011, stating that the "exceptional drought conditions... pos[e] an imminent threat to public health, property and the economy." This proclamation allows the waiver of all rules and regulations that may inhibit or prevent prompt response to address the drought.

Harm from Following 2010 WMP Requirements

21. The current drought conditions are outside the range of hydrologic conditions that were considered during formulation of the 2010 WMP.
22. Unless a change in the weather occurs that contributes significant water to storage in Lakes Buchanan and Travis, following the 2010 WMP will require LCRA to:
 - a. Make a substantial quantity of stored water available for interruptible use and enter into contracts for interruptible water, based on January 1, 2012 combined storage;
 - b. Begin releases of interruptible stored water to meet demands in the four irrigation operations for the 2012 crop;
 - c. Suffer a significant likelihood of reaching the third (and final) criteria for Drought Worse than Drought of Record (DWDR) conditions;
 - d. Declare a DWDR;
 - e. Cut off stored water for interruptible contracts, thereby ruining the crop already planted and wasting the water already released and diverted; and
 - f. Curtail cities' and industries' water use by 20% or more.
23. The 2010 WMP includes conditions under which the LCRA Board of Directors may declare a DWDR. To declare a DWDR, the Board must find that the following three conditions are simultaneously met:
 - a. Duration of drought is more than 24 months, which is determined by counting the number of consecutive months since both Lakes Buchanan and Travis were last full;
 - b. The cumulative inflow deficit since the beginning of the drought exceeds the envelope curve for cumulative inflow deficits by at least 5% for six consecutive months; and
 - c. Lakes Buchanan and Travis combined storage has less than 600,000 acre-feet of water.
24. The first two criteria for a DWDR have been met. The drought has lasted more than 24 months and the cumulative inflow deficit for Lakes Buchanan and Travis as of September 29, 2011 exceeds the criteria in the 2010 WMP.

25. Following the 2010 WMP creates a risk that a DWDR will be declared during the growing season unless there is a substantial increase in storage before planting begins.
26. The 2010 WMP requires that firm customers (mainly cities and industries) be curtailed on a pro rata basis and that LCRA cease all releases for interruptible stored water (*regardless* of the impact on the crops) when a DWDR is declared.
27. Without significant rains, LCRA currently forecasts that combined storage in Lakes Buchanan and Travis will drop to between 640,000 and 680,000 acre-feet by January 1, 2012. At this January 1 combined storage, the 2010 WMP requires LCRA to make available around 170,000 acre-feet for diversion for interruptible irrigation use in the lower basin for the 2012 crop year.
28. Not including the amount of water needed for firm water users, evaporation, and releases for instream uses, the combined storage of the reservoirs would likely drop to 600,000 acre-feet well before irrigators could finish their crop.
29. Under the present and likely future weather patterns, LCRA has concluded that storage must be at or above 920,000 acre-feet before the risk of following the 2010 WMP can be reduced to reasonable levels.
30. If LCRA is required to follow the 2010 WMP and the drought continues, LCRA and its customers may need to acquire or develop large quantities of alternative water supplies to meet essential needs of their respective potable water systems. The length of time that it takes to develop or conserve significant quantities of water supply mean that a water supply emergency arises well before a reservoir goes dry. For the most part, LCRA's firm customers do not have any readily available alternative sources of water supply that could substitute for their reliance on the Colorado River. To follow the 2010 WMP under the current drought conditions would pose an imminent threat to firm customers served by LCRA from Lakes Buchanan and Travis.
31. As the lake levels drop, it becomes more difficult and expensive for the retail water suppliers to pump water from Lakes Buchanan and Travis. Currently, LCRA owns five systems that take raw water from Lakes Buchanan and Travis. LCRA also has twelve customers that actively take raw water for municipal purposes from Lake Travis that are not a part of LCRA's utility facilities. The lowest pumping elevations of the intakes range from 545 feet mean sea level (msl) to 630 feet msl on Lake Travis. If the levels in Lake Travis or Lake Buchanan drop below the current lowest pumping elevations, LCRA and its wholesale raw water customers must take action to either lower their pumping elevation or find alternative supplies. For smaller systems, the alternative is likely hauling water from a water utility with a viable source. For larger systems, temporary measures must be implemented to extend the intake capabilities to reach lower elevation water. Similar measures would likely be needed by LCRA's raw water customers that have their own intake facilities. If the lake levels drop more quickly than arrangements for alternative intakes or supplies can be implemented, the current drought presents an imminent threat to public health and safety for the LCRA water systems and for its customers' water systems.
32. The 2010 WMP requires LCRA to make its decisions about how much interruptible stored water is available in November based on projections of combined storage capacity

for January 1, with releases of the water beginning in March. This short decision-making window is not compatible with the more lengthy WMP amendment process. Because the WMP is required by, and incorporated into, LCRA's Certificates of Adjudication 14-5478 and 14-5482, the WMP may only be amended in the same manner and following the same procedures as one would amend any state-issued water right, which procedures for this type of amendment would require basin-wide 30-day public notice and significant staff review. Although LCRA is nearing the end of a process to finalize proposed revisions to the 2010 WMP, it does not expect to have those on file with the Commission until next year – too late to address the 2012 growing season.

33. The time period in which LCRA must make decisions regarding its commitments of interruptible water occur long before there could be any decision on any amendments to the 2010 WMP if the regular TCEQ water rights permitting procedures are followed. Thus, the emergency authorization is the only means by which LCRA can be provided with the flexibility to determine if it can commit to supplying interruptible stored water to its irrigation operations.

Conservation and Drought Contingency Plans

34. LCRA has, to this point, fully implemented its Drought Contingency Plan. All of LCRA's customers that currently divert and purchase water from LCRA must have a drought contingency plan. As of September 23, 2011, 83% of those customers, representing over 95% of customer demand over the last twelve months, have plans on file. The other customers have been notified that they are out of compliance.
35. In August 2011, the combined storage of Lakes Buchanan and Travis reached 900,000 acre-feet. As required by the WMP, LCRA called on its firm water customers to voluntarily implement mandatory water use restrictions under their individual DCPs to reduce their water use by 10 to 20 percent. Information was sent out via a press release, direct email notifications to customers, and certified letters.
36. Since the 900,000 acre-feet trigger was reached, twenty-one (21) LCRA municipal customers and LCRA's retail water utilities began implementing mandatory water restrictions. These customers in drought restrictions represent more than 90 percent of the population served in the LCRA water supply area. Most of the restrictions currently in place limit outdoor watering and other non-essential uses and include a public awareness element such as direct mailings, community presentations, and informational signs.
37. Also charged with the goal of reducing their water use by 10 to 20 percent, ten firm irrigation and recreation customers have informed LCRA of the water reduction measures they had implemented to cut back their water use. Most golf courses have reduced their overall water budget, while others have scaled back on ornamental beds, area of irrigated roughs (areas not essential to the playability of a course), or other high water using areas. LCRA industrial customers, including power plants and a few large industries along the Gulf Coast, have taken steps to limit non-essential water uses, such as limits on outdoor watering. However, these cut-backs of discretionary use have likely resulted in minimal savings compared to the total water use of these industries. Any further cutbacks will result in a decrease in production.

38. When LCRA declares a DWDR and releases of interruptible stored water cease, LCRA's DCP requires firm customers to implement measures to try to immediately reduce their water consumption by twenty-percent (20%). To achieve a 20% reduction in use will require firm customers to implement fairly dramatic measures. Firm municipal customers would likely have to eliminate all outdoor water use. Further, industrial customers, including power plants, would likely have to curtail their production.
39. National benchmarking research shows that these savings are achievable but that it will likely take water suppliers considerable time (up to a year) to implement drought restrictions that result in the level of water savings identified in LCRA's DCP.

Alternatives

40. LCRA explored several alternative water supplies that might be available to alleviate strain on LCRA's water supply reservoirs caused by persistent drought conditions.
41. LCRA evaluated the following alternatives to address the emergency conditions that the drought presents:
 - a. Amend downstream run of the river rights to allow diversion at new locations;
 - b. Utilize water from LCRA's Lakes Inks, LBJ, and Marble Falls;
 - c. Conservation incentives and customer buyouts of non-essential uses;
 - d. Aggressive municipal conservation;
 - e. Garwood dry year option;
 - f. Groundwater;
 - g. Wastewater reuse program in the Highland Lakes;
 - h. Line or pipe high loss canals utilized by industry;
 - i. Interbasin transfers or water trucking/rail transport; Ocean or brackish groundwater desalination.
42. None of the identified alternatives would avert the projected water supply shortage because most of the supplies identified would produce insufficient or uncertain quantities of supply, would create other operational issues for customers, involve a lengthy permitting process (if not implemented on an emergency basis), or would take years to develop. None of the alternatives identified are feasible or practicable alternatives to the emergency authorization.

Requested Relief

43. In collaboration with affected stakeholders, representing agricultural, municipal and environmental interests within the basin, LCRA has determined that a reduced amount of interruptible stored water (up to 125,000 acre-feet for diversion) could be provided if storage is at or above 850,000 acre-feet on March 1, 2012, with a much-reduced risk of reaching 600,000 acre-feet of combined storage in Lakes Buchanan and Travis during first crop. This 125,000 acre feet of water is the amount LCRA estimates it needs to meet its contractual obligations to Garwood Irrigation Company and Pierce Ranch, and support a minimal amount of acreage in its Gulf Coast and Lakeside operations.
44. Specifically, LCRA requests that it be allowed to implement a different process than required by the 2010 WMP for curtailment of interruptible stored water that would:

- a. Provide no interruptible stored water to customers within its Gulf Coast and Lakeside operations if combined storage is below 850,000 acre-feet on March 1, 2012;
 - b. Provide no more than 125,000 acre-feet of interruptible stored water for diversion for customers within the Gulf Coast, Lakeside, Garwood and Pierce Ranch operations if combined storage is at or above 850,000 acre-feet and less than 920,000 acre-feet on March 1, 2012;
 - c. Provide interruptible stored water in accordance with the then current Water Management Plan if combined storage is at or above 920,000 acre-feet on March 1, 2012;
 - d. Provide interruptible stored water for second crop only upon a determination by the LCRA Board that sufficient water is available; and
 - e. Provide interruptible stored water to Garwood and Pierce Ranch customers, in accordance with their contracts.
45. Consistent with the Governor's Proclamation, LCRA requests that procedural requirements associated with this request, or any portion thereof, be waived to expedite the processing of this request.

Notice

46. Notice was provided to the Governor. Notice for the Commission hearing to affirm, modify, or set aside this Emergency Order will be provided by mailed notice to all water right holders in the basin.

CONCLUSIONS OF LAW

1. The Commission may issue an emergency order under TEX. WATER CODE § 11.139 to amend a certificate of adjudication after notice to the governor if the commission finds that emergency conditions exist which present an imminent threat to the public health and safety and which override the necessity to comply with established statutory procedures and there are no feasible practicable alternatives to the emergency authorization.
2. The executive director may issue an emergency order after notice to the governor if an imminent threat to the public health and safety exists which requires emergency action before the commission can take action and there are no feasible alternatives. TEX. WATER CODE § 11.139(f). A hearing to affirm, modify, or set aside the Emergency Order must be held by the commission as soon as practicable, but not later than 20 days after the Emergency Order is granted.
3. Notice of the commission hearing to affirm modify or set aside shall be given as the commission considers practicable under the circumstances.

4. Consistent with the Governor's Proclamation, the procedural requirements associated with this request, or any portion thereof, may be waived to expedite the processing of this request.
5. The Findings of Fact show that the requirements of Conclusions of Law 1 – 3 have been met. The executive director has the authority to issue this order. A commission hearing to affirm, modify, or set aside will be held on December 7, 2011.

NOW, THEREFORE, BE IT ORDERED BY THE EXECUTIVE DIRECTOR OF THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. LCRA's WMP, Permit No. 5838, is amended to temporarily establish a different process for curtailment of interruptible stored water that would:
 - a. Provide no interruptible stored water to customers within the Gulf Coast and Lakeside operations if combined storage is below 850,000 acre-feet on March 1, 2012;
 - b. Provide no more than 125,000 acre-feet of interruptible stored water for diversion for customers within the Gulf Coast, Lakeside, Garwood and Pierce Ranch operations if combined storage is at or above 850,000 acre-feet and less than 920,000 acre-feet on March 1, 2012;
 - c. Provide interruptible stored water in accordance with the then current Water Management Plan if combined storage is at or above 920,000 acre-feet on March 1, 2012;
 - d. Provide interruptible stored water for second crop only upon a determination by the LCRA Board that sufficient water is available; and
 - e. Provide interruptible stored water to Garwood and Pierce Ranch customers, in accordance with their contracts.
2. This Order was issued without a hearing. A hearing to affirm, modify, or set aside this Order will be held before the Commission on December 7, 2011.
3. This Order shall become final and effective on December 31, 2011.
4. This Order shall continue until the later of:
 - a. The initial 120 day period allowed by Texas Water Code § 11.139, and any extension thereof as allowed by Section 11.139; or
 - b. The termination or expiration of the Governor's Disaster Proclamation of the Exceptional Drought Conditions, originally issued on December 21, 2010; or
 - c. The issuance of any TCEQ Order approving amendments to the 2010 WMP, as may be filed by the LCRA consistent with the January 27, 2010 Order Approving

Amendments to the Water Management Plan, if such Order is issued prior to December 31, 2012, or

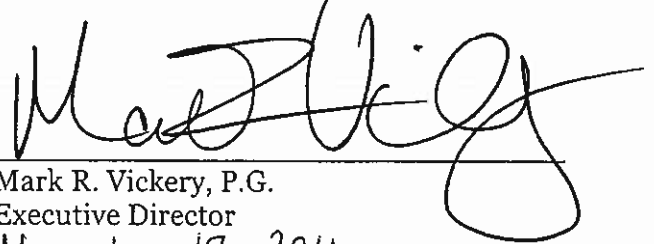
d. December 31, 2012.

5. The Chief Clerk of the Commission shall forward a copy of this Order to all parties.
6. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this Order.

Issue Date:

NOV 17 2011

TEXAS COMMISSION ON
ENVIRONMENTAL QUALITY

A handwritten signature in black ink, appearing to read 'Mark R. Vickery', is written over a horizontal line.

Mark R. Vickery, P.G.
Executive Director

November 17, 2011